

THE NATIONAL WOOL GROWER

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Our Present and Prospective Meat Supply

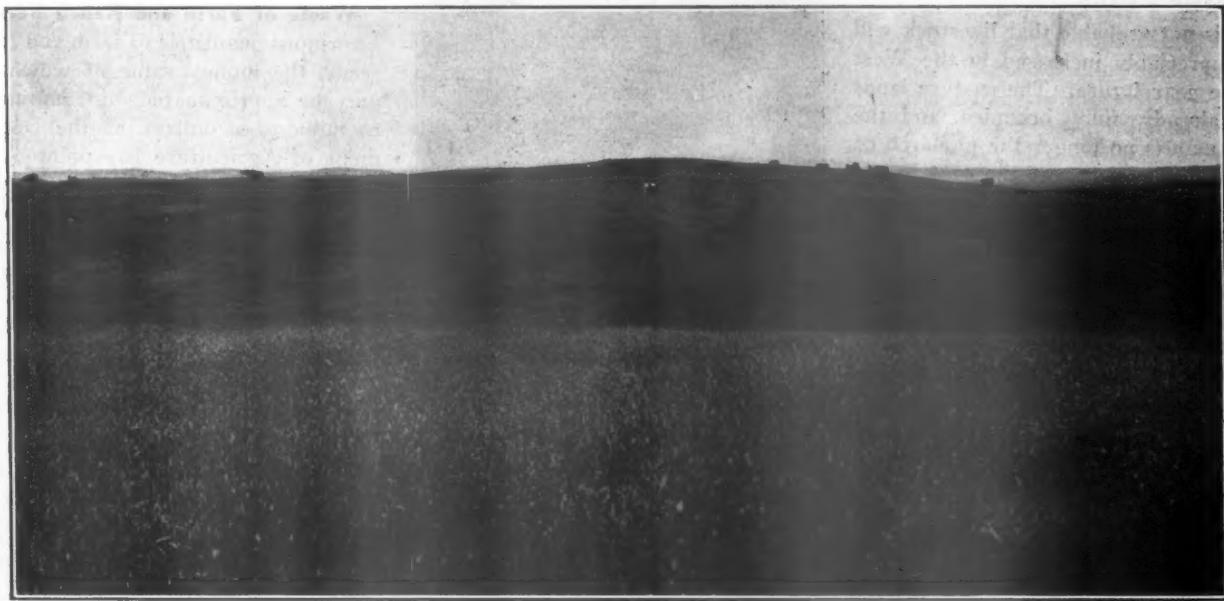
By MAURICE E. WOODS

Livestock is the salvation of all agricultural countries. Without an adequate balance between grazing animals and the production of cereals and other farm crops the human body cannot be properly nourished, the soil fertility of tillable lands cannot well be maintained, and the vast natural forage re-

ably never will be. The meat eating habit is firmly fixed, and it forms an important part of the diet of all advanced nations.

While there has in recent years been an increasing demand in this country for meat products of all kinds, from 1905 to 1915 meat production did not

ita, as well as in the export of meats and the numerous animal by-products. While we have not, during the last few years, exported as much meat as formerly, our meat production, from the viewpoint of the packing industry is nevertheless enormous—in fact the value of our packing products exceeds



The Highest Use of This Land is the Grazing of Sheep and Cattle

Sources of our Western grazing lands cannot be turned to a useful purpose.

In spite of the fact that people of the United States have a more generous diet and a larger variety of food products than those of European nations, more meat under normal conditions is consumed by Americans per capita than by any other people. This prominence of meat in our diet undoubtedly has had a favorable effect on the thrift and energy of Americans. Meat substitutes are not popular either in this country or elsewhere, and they prob-

quite keep pace with the increase in population, there being 14,205,000 fewer cattle in 1915 than in 1907, and 2,544,000 fewer sheep in 1915 than in 1910. Unfortunately this rather serious decrease in the number of meat animals was combined with an increased cost of production, a condition which, of course, reflected itself in a sharp advance in the price of chops and steaks. This decreased production and increased cost of meat foods, for a time at least, caused a slight reduction in the amount of meat consumed per cap-

that of any other single manufacturing industry. In 1910, for instance, the value of the meat packing products amounted to more than \$1,370,000,000 as compared with \$1,228,000,000 for foundry and machine shop products, the closest rival.

To handle this enormous slaughtering and meat packing requires the year long employment of an "army" of more than 100,000 men. The Western half of the United States, indirectly at least, supplies the packing plants of the country with considerably more

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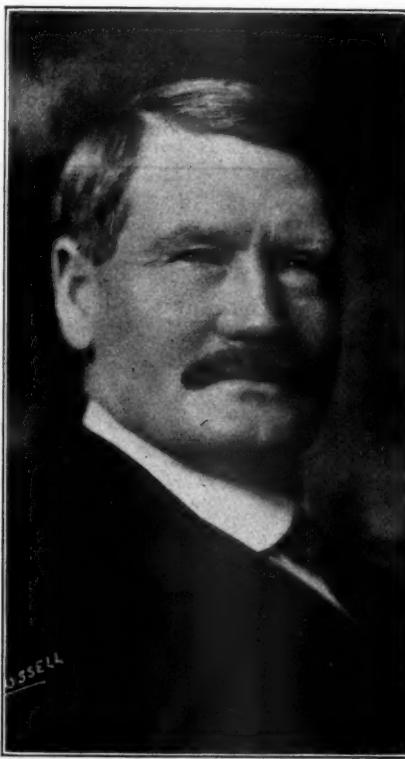
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than half of its enormous product. In 1915 as a concrete example, that part of the United States west of the 100th meridian (which the reader will recall approximately divides North Dakota and Nebraska in equal parts) supported 11,313,000 more cattle and 20,600,000 more sheep than the East; or in other words nearly one-third more cattle and three times more sheep were produced in the Western half of the United States than in the Eastern half. This condition, of course, is due to the particularly favorable conditions for the rearing of livestock in the West as compared with the growing of field crops and other agricultural products, such as are produced so extensively in the Eastern states.

It is not probable that livestock will be appreciably increased in the West in the near future. The pasture lands are already fully occupied, and the stockman is no longer the monarch of all he surveys, as was the case in the good old days. Present years have witnessed a change in many range sections from a state of open grazing lands to settled communities with the land in ownership, or held under homestead entry. In the Pacific and Western states alone over 123,000,000 acres of public land were homesteaded between 1905 and 1915, only a relatively small portion of which reverted back to the states. Of the 275,000,000 acres of public domain unclaimed in January, 1917, nearly all of which is valuable only for grazing, millions of acres have already been applied for under the recent Grazing-Homestead act and in a short time this land will be in the hands of the private individual. It has repeatedly been pointed out in the columns of the National Wool Grower that the passing of these lands into private ownership will have a most detrimental effect on the raising of livestock in the West. The Western stockman is largely dependent upon these superb natural breeding grounds and to be suddenly deprived of them will force hundreds of enterprising men out of business. There appears to be no hope of delaying the homesteading of these lands, yet if this is not done a

serious meat, wool, and leather shortage is sure to be felt in this country.

Aside from the inevitable curtailment of our public domain range, and the over-grazing of much of the public and privately-owned pasture lands, several other more or less controllable factors are retarding the progress in livestock expansion, chief of which are (1) losses caused by disease and exposure, (2) waste of farm and ranch feeds, and (3) failure properly to finance livestock enterprises.



H. C. Campbell, Flagstaff, Arizona
Executive Committeeman

Diseases and Exposure—The available meat supply would be greatly increased and the expansion notably more rapid if the more common diseases were better controlled and the heavy losses caused by exposure from inclement weather minimized. Since 1900 it is estimated by the Federal Government that from 1,000,000 to 1,475,000 cattle have died each year from various diseases and from 600,000 to 1,500,000 from exposure. In the case of sheep the losses from disease have been similar to those of cattle, but

from exposure much greater. A little feed, effective windbreaks or inexpensive open sheds are often determining factors between profit and loss.

Ample supplemental feed in winter and suitable shelter will not only greatly decrease losses from exposure but from disease as well. An animal weakened from disease and exposure cannot reasonably be expected to return a profit unless ample feed is provided to build up a weakened condition. The more enterprising stockmen are now protecting themselves against such mortgage barriers. A little shelter from the wind and a stack of hay, with possibly a small amount of concentrates, is usually one of the best investments a stockman can make.

Waste of Farm and Ranch Feeds—Enormous quantities of farm and ranch feeds, the money value of which can only be approximated, but amounting to millions of dollars, as the Department of Agriculture has pointed out, are wasted annually or put only to limited use. Failure to utilize to the best advantage the numerous by-products of farm and ranch has increased unnecessarily the cost of meat animals; it has diminished profits from feeding all classes of livestock; and it has correspondingly decreased the fertility of the soil.

No system of maintaining soil fertility is as economically conducive to crop production as the feeding of livestock. In far too many instances straw, corn stover, the sorghums (Kafir corn, milo maize, etc.) pea factory refuse, and other roughages are only partly utilized to the best advantage, i. e. for livestock production.

Of the annual straw crop of about 120,000,000 tons, it is estimated that only two-thirds is fed or otherwise used in connection with livestock; like corn stover, the sorghums and similar crops, enormous quantities are either burned—an almost total loss, or scattered over the fields shortly after harvesting when much of their fertilizing value is lost through leaching.

By far the best results from feeding farm roughage are obtained, of course, when fed in connection with some con-

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centrated feed. It is the present practice to export for the use of European feeders vast quantities of cottonseed meal and cake, molasses, corn, and other valuable concentrates. If the roughages that are now largely wasted were used to feed livestock, all these valuable concentrates could be used by the American farmer and ranchman. The result would be a notable saving not only of the cost of steaks and chops but of the cost of maintaining soil fertility as well.

In many instances the feeding of straw and other available feeds in the winter would insure better utilization of the summer forage crop. How often has one not been told, when inquiring as to the use of a waste meadow or grassy hillside that cattle or sheep were too high in price in the spring for economic pasturing. By utilizing the roughage to lessen the cost of wintering, which would otherwise have little or no money value, stock may be purchased to advantage in the autumn and the spring, and the summer forage grazed to advantage.

The economic use of all available feeds is of utmost importance to the American meat producer as only those will succeed who are able to put to the best use all palatable feeds.

Financing Livestock Enterprises— As in other large industries, credit is the basis of the livestock enterprise and recent appreciation in values of meat animals has materially increased the monetary necessity of the trade. Despite the high cost of livestock, however, neither the investor nor the lender is assuming greater responsibility than when meat animals were less costly.

The most desirable livestock as security for loans from the standpoint of the banker are, of course, cattle and sheep in the feed lot. Such animals usually gain in weight and in intrinsic value from the day the loan is made on them. Loans on livestock maintained on range and pasture are frequently discriminated against, partly because the animals are often scattered and not constantly under close observation of their owners. Again, in times of se-

vere drought or abnormal storms the lender finds it necessary to make frequent inspections. Such inspections are expensive and decrease the money earnings. Pasture and range livestock as security for loans have been unpopular throughout the history of the livestock industry. However, now that supplemental winter feeds are becoming popular there is a minimum amount of risks from starvation as formerly, so that it is only a matter of time until the stocker livestock will be considered first class security. Of course, one drawback is that bankers are compelled to keep their assets in

ation of the waning meat supply of the nation would be eliminated. The financing of the livestock industry during the next decade will necessitate the use of more money than in the past ten years, and the Loan Company system is sure to gain materially in prominence. However, it must be remembered that every dollar of his own capital the producer can put into his business will fortify his position just that much.

FINE WEATHER IN OREGON

We are having one of the mildest winters that we have ever had here. There has been very little feeding, especially sheep. They have been doing exceptionally well, and will have the best wool crop that we have had in years if the winter continues this way.

There hasn't been any sheep or wool contracted for spring delivery yet.

The grass has been and is now as good as in April.

Enclosed find picture of three-year-old heifer that raised the five lambs and ran in the pasture with them until sold last fall for \$9.50 each. These were owned by Birdie McGreer.

ED. McGREER.

WORD FROM TEXAS

I am enclosing herewith M. O. for \$1.00 for renewal of subscription to your splendid paper.

While I am out of the sheep business, I get so much real good clean reading and so much general information as to conditions from all over the stock country, that I would feel lost without the National Wool Grower to look forward to.

A full oat crop was planted here for winter grazing, for ewes and early lambs, but was a total failure on account of continued dry weather, and an exceptionally early frost.

Many small bunches of ewes mostly culls sold at \$10 per head, and extra toppy young ewes sold at \$20 per head. Taken as a whole, the condition of sheep throughout this section is very good.

H. E. CROFTS, Texas.



H. R. Mills, Hartsel, Colorado
Executive Committeeman

liquid condition and their business requires a remittance at frequent intervals, preferably not more than six months apart. The commission man financing grazing and feeding operations is in a similar position. However, a herd of cows or a band of ewes are as safe a loaning proposition as can be had, especially if the contract includes the increase. Cattle and sheep raisers planning a breeding enterprise necessarily have to figure several years ahead, rendering their papers an investment loan. If the necessary long-time loans could be obtained at reasonable rates of interest one of the most serious handicaps in the recuper-

Exterminating Predatory Animals

By E. W. Nelson, Chief, Bureau of Biological Survey, Department of Agriculture

With the increasing population of the United States, especially in the West, the amount of game is steadily decreasing and predatory animals have become increasingly destructive to domestic stock. The annual losses to livestock from wolves, coyotes, and mountain lions, have grown to more than \$20,000,000 in value. During the summer of 1917, Mr. Charles B. Stewart, chairman of the State Livestock Board of Utah, made a survey of the losses to the wool growers of Utah and the adjacent parts of the surrounding states. As a result of this inquiry he estimates the annual losses from predatory animals in this area to be about 500,000 sheep.

During the same season Dr. R. I. Crile, president of the Agricultural College of New Mexico, made a similar survey to ascertain losses of stock in that state. He found that about 165,000 sheep are killed annually in New Mexico. These estimates of annual losses for two states indicate what is occurring throughout the twelve Western stock growing states. The character of the losses occurring in individual localities is indicated by a few of the great number of instances which have been brought to my attention.

During last season in Morgan County, Utah, \$500 worth of sheep were killed by coyotes from one herd in less than two hours. The secretary of the Western Slope Sheep Growers Association of Colorado, reports losses of more than \$1,000 in each of many herds and a total loss in his district during the past season of more than \$80,000. Near Antonito, Colorado, in May, sixty-seven ewes valued at \$1,000 were lost from a herd and found two days later all killed by coyotes. Near Ozona, Texas, two wolves in two weeks killed seventy-six sheep.

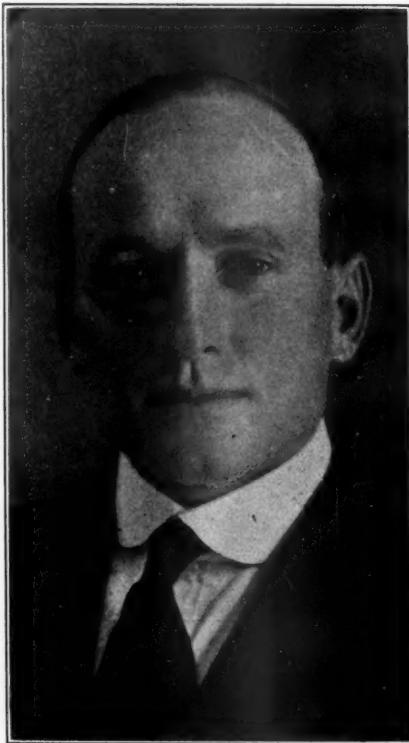
For more than 100 years bounties have been paid for the destruction of predatory animals and a total expenditure amounting to tens of millions of dollars has been made for this purpose

without in any case securing permanent relief. During the last twenty years Montana has expended more than two millions of dollars in bounties and still has on hand its predatory animal problem. As a result of the failure to secure permanent benefit from bounties combined with the fact that much of the stock grazing of the West is conducted on government land, stockmen have secured Federal appro-

it evident that in order to be effective the expenditure of the government appropriations should be made under some other system. As a consequence, from the time the Federal appropriation for controlling predatory animals was first made the Biological Survey has considered the problem as a business proposition and has planned the work with a view to bringing about the practical elimination of predatory animals and the losses caused by them.

The twelve stock grazing states of the West, with their enormous areas of forest reserves and other public lands, were divided into nine districts each in charge of an inspector who was familiar with the country and who had a good knowledge of methods of hunting and trapping wild animals. The inspectors were authorized to employ the best hunters in their district at good wages, the hunters not to be permitted to accept bounties from any source, and the skins of all animals obtained to become the property of the government.

The Federal appropriation available for the control of predatory animals, while not large enough to cover the country as thoroughly as desirable, has been sufficient to enable the Biological Survey to organize and train an efficient force of trappers numbering from 150 to 300, depending upon the time of year. It is evident that with the present appropriation alone many years would be required for the Biological Survey to accomplish the gigantic task of eliminating losses from predatory animals. In order to make the campaign more comprehensive and more rapidly effective it is our desire to enlist the friendly co-operation of state and local organizations, and individuals, in the work. It is a source of much gratification to me that the work has already been sufficiently successful to awaken widespread interest and a desire for this co-operation among great numbers of stockmen and farmers through the West. I think I am safe in saying that with thorough-going co-operation in the states the



Prager Miller, Roswell, New Mexico
Executive Committeeman

briations for the purpose of controlling predatory animals in the public domain, amounting the present fiscal year, to about \$270,000. It is evident that when the sum mentioned is subdivided and used over the vast area included in the twelve Western stock growing states the amount available for each state is comparatively small for the object to be attained.

The long continued failure of the bounty system to bring permanent relief from predatory animals has made

losses from predatory animals will be rapidly reduced.

It is evident that in order to cover the vast territory involved and to destroy the hundreds of thousands of existing predatory animals, the campaign will cost some years of effort and considerable sums of money. There is little doubt, however, that the total expenditure of less than the losses from this source for a single year will reduce the losses to a comparatively insignificant amount. The larger the sum available each year, within reasonable limits, the more effective and economical will be the work and the more quickly the campaign will be brought to a close.

From the beginning of this work Biological Survey experts have been constantly conducting experiments and investigations to obtain new methods for the destruction of predatory animals, and when improved methods of trapping or of poisoning are worked out they are passed along to the organization throughout the states in order that the efficiency of the force may be brought up all along the line.

One of the methods which has proved very effective has been that of sending hunters promptly to districts where severe losses are reported to be occurring among livestock in order to promptly destroy the offending animals. In this way many notable stock killing wolves, coyotes, and mountain lions, and a few bears, have been killed greatly to the relief of the flock owners. We desire that stockmen should immediately notify our state inspectors whenever losses become serious among their herds or flocks in order that so far as our means will permit, hunters may be sent promptly to their ranges.

For the first time the control of predatory animals has been undertaken in a businesslike, persistent, organized national campaign. In this work, as in any other, the effects of continued organized efforts are certain to be productive of better results than the "hit or miss" unrelated efforts which have hitherto been made.

Up to the last of November, 1917, the Biological Survey hunters have

taken skins of 1,164 wolves, 46,250 coyotes, 125 mountain lions, 5,813 bobcats, and 123 bears, making a total of 53,475 predatory animals. The Forest Service has estimated that each wolf averages to kill annually about \$1,000 worth of livestock; each coyote about \$50; each mountain lion \$500, and each bobcat \$50. On this basis the killing of the animals, whose skins have been taken already by the Biological Survey hunters, will save the stock growers of the West nearly \$4,000,000 annually.

In addition to the work done in trapping and hunting, the Biological Survey has conducted poisoning campaigns on a large scale in several states. The results have been most promising as indicating the possibility of greatly hastening the destruction of predatory animals in comparison with the slower methods of trapping and shooting. More than one million poisoned baits have been distributed and judging from the disappearance of coyotes in areas where the poisoning campaigns have been conducted and from the number of dead coyotes which have been subsequently found, it appears safe to estimate that approximately 100,000 coyotes must have been killed by these poisoning operations. When the snow disappeared in spring from a national forest in northern California where poisoning operations had been conducted during the winter 159 carcasses of dead coyotes were found in one small valley. The flock owners of Dry Valley, San Juan County, Utah, reported that previous to 1916 their losses had been about 5 per cent of the herds wintering in that region. A poisoning campaign was put in force there during the fall of that year and sixty-five dead coyotes subsequently were found in that vicinity. The losses during the following winter were insignificant. A similar experience was had in San Luis Valley, Colorado, where following poisoning operations the losses during the winter of 1916 were nominal.

In a district in Nevada government hunters trapped and poisoned extensively last winter. During the spring a flock owner was forced to leave sev-

enty-five poor ewes on the trail while moving his flock to summer feeding grounds. Two weeks later he returned and found the entire lot undisturbed by coyotes. In the Mt. Adams district of Washington last fall where the range had been cleaned of predatory animals by our hunters, 1,200 sheep were lost for three days and were found without having been molested.

A flock owner near Arlington, Oregon, writes that his herder lost about 400 ewes and they were not recovered for about ten days. He adds that this was the first time in his twenty-five years' experience on this range that a strayed band of sheep had been recovered without heavy losses. This was due to the fact that this range had been thoroughly worked over by our trappers previous to this time.

A flock owner near Yakima, Washington, reports that during the past season on a range which had been cleared of predatory animals by government hunters, he employed only about half of the herder force needed in previous years and had no losses of lambs from predatory animals. After poisoning campaign in the Uinta Forest, a flock owner reports that he ran about 8,000 ewes on that range during the lambing season of 1917. He reports that the sheep were practically turned loose on the range and he had almost no losses. We have had many reports of similar character from elsewhere which go to prove that by adequate funds and the general co-operation of the stockmen so that the grazing territory can be properly covered by trapping and poisoning operations, losses from predatory animals can be rapidly controlled.

Extended test poisoning campaigns are being conducted in several parts of the West during the present season with improved methods of preparing poisoned baits. One such operation covers southwest Wyoming, including about one-sixth of the entire state.

Another method of reducing losses which we have found to be extremely effective, is that of thoroughly poisoning and trapping predatory animals on lambing and wintering ranges a month or so ahead of their occupation.

When predatory animals are brought under control fewer herders will be needed, and as careful investigations show, freedom from close herding enables sheep to take on weight more quickly while at the same time the range will be improved.

Effective co-operation along the line desired by the Biological Survey is already in operation in several states and is increasing everywhere as the work progresses. The state of Nevada appropriates \$35,000 annually for co-operation in the campaign under the direction of this bureau. Utah expends more than \$20,000 annually, the state of Washington, \$15,000, and the State Council of Defense of New Mexico has recently set aside \$25,000.

Stock growing organizations and individuals are also co-operating, as in the case of the Western Slope Wool Growers Association of Colorado, which has recently assessed its members for \$2,000 to be used in this work.

As already stated the skins of predatory animals taken by the hunters become the property of the government and are sold and the money turned in to the Federal Treasury. Up to the end of November, 1917, more than \$45,000 from this source had already been turned in and there are about \$15,000 worth of skins now on hand. The skins secured by the hunters paid from co-operative funds, either state or local, belong to the organization putting up the money and the money obtained therefrom is turned into the treasury of the organization for continuing the campaign. In this connection I may say that the representatives of the Biological Survey in no case are permitted to handle the funds of the co-operating organizations. They merely employ the men and supervise their operations, certifying their services to the treasurer of the co-operator who then issues his check direct to the employee. The same system prevails as to supplies purchased with co-operative funds.

The predatory species are not the only noxious animals which are detrimental to the prosperity of the stock growers on the Western ranges.

Probably the worst enemies of the stock grower are the range and crop destroying rodents, such as prairie dogs, ground squirrels, pocket gophers and jack rabbits. These animals exist in enormous abundance over vast areas and destroy forage and forage crops such as alfalfa, oats, barley, wheat and others, amounting in value to more than \$150,000,000 annually.

Prairie dogs alone cover considerable parts of twelve states. Careful investigation has shown that their destructiveness to the range where they are numerous varies from 5 to 50 per cent of its value. The situation in a small valley containing about 640 acres near Springerville, Arizona, which contained 7,000 prairie-dog holes, is a good example of the abundance of these animals and the injury their presence is likely to cause.

Near Flagstaff, Arizona, during the summer of 1917, 320 acres infested by prairie dogs were poisoned by a Biological Survey field expert. The next day 1,661 dead prairie dogs were found on the surface within this area and there is little doubt that several hundred others must have died in their holes. Prairie dogs can be destroyed at a cost of a few cents an acre as indicated in the foregoing case where the total cost of cleaning up practically all of these animals on 320 acres totaled a little more than \$9.

The injury done by prairie dogs is not only to the forage growth which they eat, but also is due to their habit of digging up the roots of grasses and other useful plants which quickly leads to serious erosion and frequently the permanent destruction of fertility over large areas. The Biological Survey field parties have practically destroyed the prairie dogs on more than 3,000,000 acres in the national forests and other parts of the public domain. These animals are known to occupy a vast area in a number of the best grazing states. The extent of their distribution may be understood from the fact that they occupy approximately 13,000,000 acres in Wyoming.

If the prairie dogs alone were destroyed in the areas covered by them

the range they occupy could then carry more than 1,000,000 additional cattle and 1,000,000 additional sheep, than is possible at present. Ground squirrels, pocket gophers, and jackrabbits are also extremely abundant over great areas and are persistent destroyers of range values.

The losses from predatory animals and noxious rodents constitute a great drain on the output of foodstuffs. In the present emergency the destruction of noxious animals is not only of distinct gain to the stock owners and farmers, but is also a matter of national interest, inasmuch as it directly increases the output of vitally needed foodstuffs. It is evident there is no more direct and prompt method of increasing the meat output than by destroying stock killing animals. Every day hundreds, if not thousands, of sheep and cattle are killed on the ranges by wolves and other animals. Every additional dollar expended in the suppression of these pests will give a manifold return.

In conclusion I desire to say that the noxious animal problem concerns practically every stock owner of the West. The problem of bringing the heavy and unnecessary losses caused by noxious animals to an end can never be solved except by a thoroughgoing, business-like campaign which will work persistently year after year in a uniform manner throughout the West. The Biological Survey has worked out a definite plan which has been in operation for two years and which has given definite results. With the thoroughgoing co-operation of the stock growers and farming communities in the infested areas, there appears to be little question that these pests may be successfully controlled and the prosperity of the states where they occur substantially augmented.

A CORRECTION

In our January issue the report of the Red Cross ram sale credited Lafe Bown of Provo with having paid \$25. This was an error as Mr. Bown paid \$50.

Forage Utilization

Mark Anderson, Grazing Examiner, U. S. Forest Service

In an effort to make our forest ranges produce the maximum of meat and wool there are two conditions with respect to the intensity of grazing that must be carefully and energetically guarded against. Misuse, either in the form of overgrazing or under utilization must be prevented.

It is hard to determine which of the two subjects, overgrazing or undergrazing is most important in this district. Both might properly be discussed in one paper. To handle these two phases of utilization thoroughly means an attempt to define a proper standard of utilization, which I am sure no one is in a position to do satisfactorily at this time. It is believed, however, that continued and close observation will enable us to eventually establish a fairly uniform and safe standard.

It must be admitted that the ideas as to what constitutes a full or proper utilization, are local and widely at variance. Since the question of utilization is of fundamental importance it can not be swept aside with a statement that a standard of utilization suitable to local stockmen should be adopted in all cases.

The reconnaissance man is very often at a loss to know whether or not a range is below normal in forage production or whether a succession in types is taking place because of too intensive grazing. Surely his conclusions must be based on more reliable indicators than recent trampling or close cropping, which may or may not affect the future carrying capacity of the range. The range examiner must be able to recognize a temporary or local condition from those that are less superficial and more general. An overgrazed spot on an allotment is not a very reliable indicator that the allotment as a whole is overgrazed, nor is an overgrazed condition on a few allotments over a forest a positive indicator that the forest or larger unit is overstocked. A great many cases of overgrazing that have come under observation have resulted from an uneven

distribution of stock or poor herding. In cases of this kind it is obvious that the condition should not be corrected by reducing the number of stock or increasing the area per head.

Some of the earmarks of overgrazing on sheep ranges that serve as indicators are:

- (1) A predominance of non-palatable vegetation or inferior forage plants, such as Sneeze Weed (*Helenium*), Nigger Head (*Rudbeckia*), Meadow Rue (*Thalictrum*), Senecio (non-palatable species) and coarse grasses, partially or wholly non-palatable to sheep.

age could be found in sufficient quantities.

It is expected that well grounded exceptions can be taken to the statement that the lack of aspen reproduction in aspen types is an indicator of overgrazing. It is the opinion that where there has been no overgrazing in the past to upset the balance between the different classes of plants, meaning shrubs, weeds and grasses, that aspen under ordinary grazing will be grazed only to a limited extent. On the forest ranges in southern Idaho only a small per cent of the aspen shoots and seedlings are browsed and these mainly on bed



Sneezeweed on Overgrazed Range Make Up the Principal Part of the Forage

- (2) Dead and partially dead stumps of shrubs such as Snowberry (*Symporicarpos*), Currant (*Ribes*), Willow (*Salix*) and Service Berry (*Amelanchier*).

- (3) Lack of variety in species or predominance of annuals.

- (4) Absence of aspen reproduction in aspen types.

- (5) Erosion and barrenness.

The loss of cattle in considerable numbers from larkspur poisoning may also in many instances be attributed to overgrazing. The cattle, in the absence of other green forage, eat more of the larkspur than they would if better for-

grounds and along driveways. Apparently in this locality where browse species occur in primitive abundance, aspen ranks very low in palatability. The absence of aspen reproduction should not alone be taken as conclusive evidence that a range is being overgrazed. If the range has been overgrazed to any extent other indicators will also be found.

It is evident that a denuded condition is not the worst stage of overgrazing, because there are instances where overgrazing has resulted in erosion and leaching that may be said to represent a condition "two or three

stages below no vegetation." Soil that has taken Nature hundreds of thousands of years to produce may be carried away in a very short time. The evidence of this erosion may or may not be strikingly apparent. Erosion of the "gulleying" nature is more evident than the no less serious sheet erosion.

The question, does overgrazing always result in a reduced grazing capacity, may be answered by saying that any grazing that reduces the grazing capacity of the range may be called overgrazing; but grazing may bring about a succession of species without actually reducing the grazing capacity. It is reported that overgrazing on parts of the Wallowa Forest in Oregon has produced a type of clover where pine grass was the original type. It would appear in this case that overgrazing has resulted in an increased grazing capacity. I doubt, however, that this should be called overgrazing.

Apparently in many instances we have a type of overgrazing that may be termed "class" overgrazing, that is, one class of forage plants may suffer through too close utilization while another class shows no effect and in reality is given an advantage in competition. For instance, on a range where grasses from primitive times have predominated there may be relatively few weeds palatable to sheep. An overgrazed condition from a standpoint of carrying capacity for sheep may quickly result where sheep are run in any number and still there may be no injury from a standpoint of watershed protection or reduction in the carrying capacity for cattle.

Whether or not a species shows the effect of too close grazing depends to a great extent on the original abundance of the species, particularly with respect to the relative abundance and palatability of the species as compared with associated plants. It is reasonable to conclude that where there is evidence of a good stand of Snowberry that is now largely killed, there were other more palatable plants that disappeared long before the Snowberry, and that the area has been overgrazed.

It has been noted also that where palatable shrubs are noticeably very scattering on a range even where palatable weeds are abundant that the shrubs are very apt to suffer under close utilization by sheep. In gauging the intensity of utilization it is believed that no attempt should be made to graze so lightly that very scattering and unusually palatable forage plants will be perpetuated in their original abundance. For instance, sweet anise (*Valeriana*) is naturally very scattering and extremely palatable to sheep. To keep the utilization at a point where this species will thrive in its original state, would in most instances result in a great, and I believe, unjustifiable loss of forage. Whether or not the intensity of grazing should be such as to perpetuate these most palatable species should depend on the abundance of this class of forage as compared with the abundance of less choice forage. To perpetuate 10 per cent and waste 70 per cent would be poor business.

It is evident that intensive grazing later in the season will do relatively much less injury than grazing of the same intensity before the plants have reached maturity. In my opinion, unless conditions are very unusual, we should not, from a standpoint of range protection, refuse to grant an extension of time at the last end of the grazing season. Ordinarily with the type of sheep range that we have in southern Idaho, if there is sufficient green feed before the first heavy frost, there will be more browse feed after the frost than the sheep can possibly consume before they would, under ordinary circumstances, be removed from the forest.

It appears that the deferred grazing season has, in most instances, played a greater part in range improvement than has a reduction of stock.

KENNETH MacLEOD DEAD

Sheepmen of southern Idaho, and more particularly those who range on the Sawtooth National Forest, will be pained to hear of the death of Kenneth MacLeod, which took place at Twin

Falls on January 17. Deceased was stricken with acute appendicitis the first day of the new year, and although all that surgical skill could do for him was done, he passed away after suffering for seventeen days. He was constantly attended to until the end came by his brothers, Murdoch and William, and by his steadfast friend and business associate, Robert Rogerson.

Too close attention to business may have been the cause of his untimely end. Two days before he was finally taken down he complained of not feeling well, but against the advice of Mr. Rogerson, he left Twin Falls for a visit to the headquarters ranch at Eden. While there he got worse, and by the time he had again reached Twin Falls, and was taken to the hospital to be operated on, it was pronounced too late.

Kenneth MacLeod was one of Nature's noblemen, and will be missed by a host of friends. Of a quiet and unassuming disposition, he was the soul of honor and manliness. Coming to Idaho fifteen years ago, he went to herding with MacRae and Rogerson in the Three Creek country, and for the past ten years he had been associated with Mr. Rogerson. As a herder, he had few equals, and latterly he was conceded to be one of the very best sheepmen in this part of the state. He knew the sheep business thoroughly and this, coupled with business ability, was the reason for his great success.

He was possessed of a most likeable disposition, and was highly respected by those who had the pleasure of his acquaintance. Of fine physique, (he stood six feet two inches) and possessed of great strength, he still was as gentle as a boy. He was born in Ross-shire, Scotland, thirty-four years ago, where his mother and one brother reside. He was buried at Twin Falls, January 18, during the Wool Growers' Convention.

A true man. He is gone, but his memory will stay green for many a year in the Wood River country.

COLIN MacRAE.

Be sure and pay your dues for 1918.

Wool Growing In Australia

By R. H. HARROWELL

The item of most concern to the wool growers of Australia at the present juncture is in connection with the appraisalment of the new clip. It is, of course, a matter of great relief and satisfaction to sheep owners to know that the Imperial government has purchased the whole clip at the generous average price of 31 cents. The growers know that payment for their clip is assured, and it will be prompt. Full payment, less 10 per cent, is generally made within a fortnight of the appraisalment.

The experience gained in working the appraisalment scheme last season rendered it necessary to revise the classification of the various types of wool produced in the Commonwealth, and the total clip has been divided with no less than 800 different classes. It requires very little imagination to form an idea of the enormous task that thus falls upon the appraisers.

If a sheep grew the same fleece year after year, the work of classification would be comparatively easy, but owing to the vicissitudes of our climate, hardly two seasons following are alike. A flush of grass during the best part of the growing season will cause a super-fine wool to lose a good deal of its elasticity; the wool will gain in yolk, and, although the former year's length of the staple will be increased, it will not be hardly as soft. This means a serious decrease in the return. Or, the season may be an unsatisfactory one—patchy—for the even growth of the fleece and this is also reflected on the quality of the wool.

The work of appraisalment is now proceeding. The quantity catalogued in Sydney last week by the selling brokers was 35,844 bales. A good deal of the wool opened up from the West and Northwest proved to be rather more burry than last season, but in good average condition, although shorter in the staple.

About 45,000 bales of Victorian wool will have been appraised by the end of this week. The new clip opened up in

good to heavy condition; the heaviness of the bales indicating the well nourished condition of the wools, particularly the Merino. The wool generally is reported to be well grown, robust, and not burry or seedy, except in occasional clips, as was expected. Although a proportion of Riverina wools has been delayed by the flooded state

will be observed up to that time, after which the roster may be rearranged in order to preserve the principle of equality laid down for observance by the wool regulations.

The wool trade is faced with an enormous problem in connection with storage, which can be best described by the following notice issued by the



A Desert Yearling Cotswold

of the country, and New South Wales-Victoria border stations shows a decrease in Victorian wool arrivals of over 8,000 bales, compared to the corresponding period of last season, Melbourne stores are taxed to the utmost capacity; and buildings usually used for ordinary merchandise are likely to be drawn upon to store the overflow consignment till the ordinary stores are relieved by wool shipments. It is expected three series of appraisalments will be completed in Victoria before the Christmas recess, and that the order of appraising, as now proceeding,

Wool Selling Brokers Association of New South Wales. It is as follows:

"With reference to the action of the government, taken at the instance of the undersigned Wool Selling Brokers, in temporarily discontinuing the dispatch of wool from country stations to Sydney the undersigned have to point out to their clients that the position with regard to the storage of wool in Sydney this year is entirely abnormal."

The delay in starting wool appraisalments, the strike, and the favorable weather conditions which have recently been experienced more or less

in this state, have all combined to bring about a set of circumstances never hitherto experienced in the history of the wool trade, and have resulted in the more or less complete congestion of the storage of wool awaiting appraisement in Sydney. Appraisements have just started, but it is expected that there will be considerable delay in delivery being taken of very much wool prior to the Christmas recess.

When it is remembered that of the 1916-17 clip, considerably over 250,000 bales were disposed of by auction or shipped direct to London up to the middle of November, 1916, (the bulk of which auctioned wool was promptly taken from brokers' stores), whereas this year not one bale has so far been removed, wool growers will recognize the enormous task facing the trade at the present moment.

Additional storage accommodation in Sydney has been secured by the trade, and at the present time all available space in Sydney for storing wool has been practically exhausted, and the premier, fully recognizing the seriousness of the position, has made arrangements with the railway commissioners to discontinue dispatching any more wool from country stations to Sydney for, say, two or three weeks, when it is expected that the congestion will be sufficiently relieved to permit of the resumption of transit.

The wool at present at Darling harbor railway station, at country railway stations, and on trucks in transit to Sydney, will practically fill wool brokers' stores and additional outside storage accommodation available.

Wool growers who have not already dispatched their wool to rail are desired to hold it until the railways resume carrying. The delay, it is hoped, will be purely of a temporary nature, and wool growers will not be penalized in the order of appraisement of their wool.

At a recent agricultural show in Victoria a rather novel competition in wool excited much interest. The competition was for fleeces to be appraised according to the scheme of payment fixed by the Commonwealth government. The wool was judged by one of

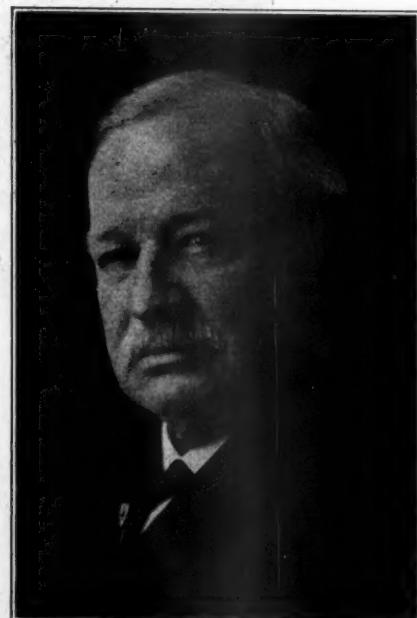
the appraisers who before judging skirted and rolled every fleece himself.

The prizes were awarded as follows:

For two Lincoln fleeces P. Kennedy, Girgarra was first, his score card showing: Fleece, 24 lb. 4 oz. at 26c per lb., \$6.30; bellies and pieces 3 lb. 5 oz. at 19c, per lb. 63c; second pieces and locks 2 lb. 11 oz. at 11c, 29c; total value \$7.22.

For crossbred wool, two fleeces C. Maskell, Tatura, was first as follows:

Fleece 12 lb. 4 oz. at 36½c per lb., \$4.47; bellies and pieces 7 lb. 10 oz. at 29c per lb., \$2.19; second pieces and



W. N. McGill, Ely, Nevada
Executive Committeeman

locks 1 lb. 11 oz. at 13½c per lb., total value \$6.87.

In come-back wool two fleeces G. Crawford, Harston, was first: Fleece 12 lb. 15 oz. at 42c per lb., \$5.37; bellies and pieces 5 lb. 2 oz. at 33c per lb., \$1.69; second pieces and locks 9 oz. 5½c, total value, \$7.11.

Whilst on the subject of wool a report from New Zealand tells of a remarkable fleece, the staple of which measured 2 feet 3 inches in length. This was grown by a full mouthed Lincoln Romney wether which had never been shorn previously. The fleece weighed 52 pounds.

Without question wool growing is

the most profitable rural occupation at this juncture, and if present conditions prevail much longer, it seems quite likely that the wheat area in Australia will materially decrease. It is estimated that the area under wheat this year is much less than last year, and no doubt it would have been even less if the wheat farmers were not loaded up with more or less expensive plants which they could not get rid of, and which represented capital expenditure on which interest had to be paid. The following estimate of the cost of producing wheat in one of the best wheat districts of New South Wales comes from a reliable practical farmer. The estimate is based upon a 15 bushel yield on a 300-acre farm, situated eight miles from the railway. It worked out at \$1.04 per bushel and as the price fixed by the Federal government is only \$1.00, 24c of which is held over indefinitely, it can be seen that wheat growing in Australia just now does not hold out great inducement. The items on which the above estimate is based are as follows:

Cost of Growing Wheat.

Land, 300 acres at \$50 per acre, improved, \$15,000.

Necessary plant capital value, \$3,650.

Summary of plant:

8 draught horses	\$1,000
2 light horses	100
8 sets harness	200
Wagon and harness	300
1 four-furrow plough	200
1 six-furrow plough	200
1 cultivator	125
1 cart and harness	100
1 set harrows	50
1 pickler	35
1 drill	215
1 binder	250
1 harvester	550
1 set of tools	25
1 grader	150
2 tarpaulins, etc.	150

Total \$3,650

Interest on land at 6 per cent \$900

Interest on plant at 6 per cent 215

Depreciation on plant at 10 per cent 365

Cost of production:
Rent of land, per acre \$ 2.88

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Ploughing (first)	1.92
Skim ploughing72
Cultivation (spring tooth)42
Seed wheat	1.02
Drilling42
Harrowing30
Harvesting84
Bags, twine and sewing	1.28
Cartage to rail96
Freight to Sydney	1.24
Pool charges94
Renewals, upkeep oil, insurance38
Extra labor at sowing24
Interest50
Depreciation98
Total, per acre	\$15.04

Of course it will be readily understood that the above estimate does not apply to every wheat district in New South Wales. Figures such as these must, of necessity, vary according to conditions, but they serve the purpose of indicating the narrow margin of profit in wheat growing at the present time. One outcome of the situation is that wheat growers are more alive to the necessity for running sheep in conjunction with their farming operations.

NOW IN THE SERVICE

Would you please send my paper to the above address, especially the edition containing the report of the convention, as I have been given to understand you had a "humdinger" this year, and naturally, being fond of the sheep industry, I am interested.

I do not know whether you will remember me or not, but perhaps you will the name. I may say that I came up here about a month ago with A. J. Knollin's shepherd, Jack Taylor, and we are now learning the art of trimming all over again, although this time it is for Germans.

ROBERT J. STODDART,
Willows Camp, Victoria, B. C.

WE KNEW THIS WAS TRUE

Certain testimony was introduced during the latter part of January in the investigation of the packers by the Federal Trade Commission, which included communications between your

secretary, T. W. Tomlinson, and R. C. McManus and Henry Veeder, representing the large packers.

We have carefully reviewed all of these communications and all other correspondence in this connection which Mr. Tomlinson has furnished us. As a result of our careful examination of this correspondence and an investigation of the interviews referred to, we find nothing which justifies any doubt of Mr. Tomlinson's complete integrity and we believe that he acted throughout this matter from motives

All the facts that Mr. Tomlinson wrote about were public knowledge and we see no reason for any explanation.—S. W. McClure.

WOULD EAT LAMB

Inasmuch as I am engaged in the production of mutton lambs of the Dorset breed, on my irrigated ranch consisting of some two hundred acres, and located in California, the enterprise being under the efficient direction of my manager, I am forcibly impressed with the truthfulness of Prof. W. C. Coffey's statement in the last issue of the Wool Grower as to the inability of the consumer to secure from the butcher shop what he desires in the way of cuts of lamb or mutton.

Due perhaps to my Scotch ancestry, I am extremely fond of my "leg o' mutton," and while I am living in a great sheep country, I have for the past eight months been unable to obtain mutton at all, and only at rare intervals previous to that time, in the local shops.

To anyone who has partaken of the delicious lamb and mutton to be had in the London chop-houses in antebellum days, the memory lingers and intensifies the desire within him for more mutton.

Should Professor Coffey's recommendations to the butchers of the country, as to the manner of cuts, be carried out, it would result in a great increase in the consumption of lamb and mutton by the American people.

VERDO B. GREGORY, M. D.

FIVE-DOLLAR YARN

Referring to your pamphlet reporting a price of \$5.00 being paid by the consumer for yarn in this city, we wish to advise that we consider this an exorbitant price. In fact very good yarn is being sold at retail in Boston at \$2.80 per pound, or 70c per hank. At this price it makes a very handsome profit, and we sincerely trust that the retailers throughout this section will get the price down to \$3.00 or \$3.50.

CRIMMINS & PEIRCE CO.



R. J. STODDART, WITH THE 2ND BATTALION, WILLOWS CAMP, VICTORIA, B. C.

of loyalty to the interests of the American National Livestock Association.

Yours very truly,
(Signed) EDWARD L. BURKE,
Vice Chairman.
ED. C. LASATER,
DWIGHT B. HEARD,
Members of the Market
Committee of the Ameri-
can National Livestock
Association.

Note—To any one acquainted with the facts this vindication is entirely unnecessary. The whole matter of investigating the packer was an open book so far as the American National Livestock Association was concerned.

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BOSTON WOOL MARKET

By Our Boston Correspondent.

Just as the local wool trade was getting into full swing again, and dealers and manufacturers were feeling encouraged to operate with freedom in South American markets, General Goethals, Acting Quartermaster General, threw a bomb into the front line trenches, February 28, in the form of a telegram announcing that the United States government had decided to exercise the options exacted on import licenses for all wools bought abroad since Dec. 15, 1917. This telegram read as follows:

"I hereby beg to notify you that the United States government has decided to exercise the option granted to it by the applicants for wool import licenses and will arrange to take over such suitable wools covered by the said option as may be required of grades from forty-fours to fifty-sixes, both qualities included, suitable either for worsteds or for woolens or for both. This decision includes so-called class four crossbreds. Please notify immediately each member of your association that all may prepare to act in accordance with the option agreement."

While this does not cover all the wools bought in River Plate markets between Dec. 15 and Feb. 28, it does apply to the great bulk of them, as the finer Chubut and other wools from the Southern provinces of Argentina have not yet been marketed to a great extent. These purchases are estimated to have exceeded 25,000 bales, and though only fours are absolutely called for, the above action will hit very hard, as until very recently, this was the grade most sought after in making purchases in Argentine wools, as fives (Lincolns) were very dull in the Boston market from December until after the middle of February.

Questions regarding government control and procedure have been under consideration for some weeks, and though the results obtained by those who sought an abrogation, or at least a substantial modification, of the most drastic features of the government's

import policy, were of a negative character, there was considerable confidence felt in the trade that the importation of the wools needed by the government would be allowed, under reasonable restriction. Provided that the element of speculation was entirely eliminated, it was considered good policy to allow American buyers to corral the needed supplies while they were to be had.

In all recent negotiations, the wool trade of the country has been represented by a committee known as the War Service Committee, whose membership included Albert W. Elliott and



Senator E. O. Selway, Dillon, Montana
Executiveman

Charles F. Cross of Boston, H. S. Silberman of Chicago, Edmund Lissberger of New York and Charles J. Webb of Philadelphia. Having been called to Washington for service in an advisory capacity, Mr. Elliott resigned as chairman of this committee about the middle of February, and A. Koshland, president of the Boston Wool Trade Association, took his place at the head of the committee. At a meeting of this National War Service Committee, Feb. 15, a series of resolutions submitted by the War Emergency Committee of the Boston Wool Trade As-

sociation were adopted and sent to the War Trade Board at Washington.

Taken up in their order the resolutions, and the answers made by C. M. Woolley for the War Trade Board, may be briefly summarized as follows: Regarding the request that the War Trade Board furnish the wool trade with a list of the concerns, if any, to whom wool cannot be sold under the present regulations of the War Trade Board, the reply was made such a list could not be furnished as it was considered that the results desired were indirectly accomplished under the existing regulations, whereby permit must be secured in each case before a sale is made, leaving the War Trade Board free to refuse such permit through the Textile Alliance, if such action seems to be justified.

Regarding the request that dealers be not required to secure permits or report sales to the Textile Alliance of wools sold to manufacturers, reply was made that while "in the case of manufacturers who are thoroughly loyal and in no wise inclined to hoard or speculate, the present arrangement must appear somewhat burdensome, we must request the better element of the trade to put up with the inconvenience, in order that the War Trade Board may be in a position promptly and efficaciously to curb any tendency on the part of the less loyal to conduct their business in a manner which will embarrass the national program. We realize some inconvenience is experienced, but to grant the request of the War Service Committee, would, in our opinion, greatly diminish the power of the War Trade Board to regulate the distribution of wool in the public interest."

On only one point were the War Trade Board and the War Service Committee in harmony, and that was as to the advisability of ascertaining the quantity of wool bought in South America for the season to date, and from Dec. 15, 1917, to date, compared with the corresponding periods last year. Full co-operation was promised and asked on this minor point.

The closing resolution contained no

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request, and only suggested by inference the advisability of the government relinquishing its present control over the importation of wool. This met with a courteous though flat refusal. This is so important a matter, that the exact wording of Mr. Woolley's reply will be of more than passing interest:

"We do not find any definite recommendation attached to this paragraph, but the inference is that the War Service Committee would be pleased to see the War Trade Board relinquish the control over the importations of wool which is embodied in the existing regulations. As to such action, we do not believe the developments would warrant it.

"We might further state that the information reaching us indicates that as much wool is being brought forward from South America as can be provided with shipping space. We do not understand that any vessels are coming from South American ports, empty, or only partly loaded. We are further of the opinion that approximately the normal share of the South American wool is flowing toward the United States, and until it is clearly indicated that such is not the case, the War Trade Board would not feel disposed to alter the existing regulations.

"It occurs to us that the War Service Committee merely wishes to put itself on record with the War Trade Board, giving their views as to the future effect of the present regulations, which, of course, they are entitled to do, and we are always very glad to carefully consider any such expressions of opinion."

Taken in connection with the telegram from General Goethals, this correspondence makes it plain that there is no intention in official circles of relinquishing any of the control of the wool trade, possible under existing regulations. Prior to the receipt of the telegram, Feb. 28, the Boston wool market was rapidly recovering its old-time form, and it would be necessary to go back to some period antedating Dec. 15, 1917, to find more activity, or so strong a feeling of confidence as that which existed when General Goethals threw his bomb. In the last two

weeks of February, thousands of bales of South American wools changed hands, here as well as in the Buenos Aires market. American buying was a very prominent feature of the latter market during that period, there seeming to be much confidence that the government would not exercise its option.

Under the influence of this accession of strength, there has been a steady appreciation in the value of standard Buenos Aires crossbreds in this market since the first of February. On that date, 5s were quoted at 65 to 66 cents, 4s at 73 to 74 cents, and 3s at 78 to 79 cents. Feb. 27, these grades were quoted at 67 to 68 cents for 5s, 76 cents for 4s and 80 to 81 cents for 3s. It is yet too early to measure the full force of the government interference, but it is expected that a premium will be placed thereby on all spot wools of the government types. Montevideo fine crossbreds have sold during the month with considerable freedom, on the basis of 85 to 86 cents for 50s to 56s and 87 to 88 cents for 56s to 58s.

Another matter that has come to a head during the month has been the opening to manufacturers of the government wools bought last August, September and October. These wools aggregated 6,118,000 pounds, largely quarter-blood and three-eighths-blood grades, both foreign and domestic. These wools are only available for manufacturers who hereafter are awarded army contracts, the fact that the government wools are to be used, and the specific lots desired, being indicated when the bids are filed. Many lots were put in by the government at cost, but in some cases selling prices were advanced to as high as 15 to 16 cents over cost. Presumably the prices are so adjusted that the manufacturers will pay administration and interest charges on the wools from the time they were bought until they were sold. Four months' storage and insurance were guaranteed by the sellers, while other charges of that nature must be paid by the buyers.

As might be expected the opening of these wools was a depressing factor on

the trade, and the same may be said of the Australian wool auctions, which are now nearly one-half completed. The next series will be held March 7 and 8, to be followed by further sales on March 21 and 22 and April 17 and 18. Considering the quality of the offering, high prices have been realized throughout the sales, the bulk of the wools being taken by manufacturers and topmakers. At the Feb. 14 sale, the offerings contained a large proportion of burry and shabby wools of all descriptions, but the experts say that they brought all they were worth. On that night 1,465 bales were withdrawn or passed without bids, while on the following evening only one bale was so disposed of. Most of the wools withdrawn were afterwards disposed of at private sale.

Over 1,600 bales crossbreds were included in the offerings, and these have brought full prices. These wools were sent to this country by mistake, as it was not intended to let this country have anything but fine wools, but the returns have been so good that it was a very profitable mistake for the British government. It is said that some lots brought more money in the grease per pound, than similar wools were selling for in England in scoured form. The choicest lots of Geelong combing have shown a clean cost running well over \$2, the average for all grades being fully at or above a similar range for domestic grades.

Notwithstanding this, it cannot be denied that the distribution of so much wool has had a depressing effect on the market for domestic fine wools, especially fine Territories. This is shown by the estimated range of scoured values, which are distinctly easier for good fine and fine medium clothing Territories than they were in December. Current quotations of Territory wools on the scoured basis in this market are \$1.75 to \$1.80 for fine staple, \$1.70 for half-blood staple, \$1.50 to \$1.55 for three-eighths-blood staple, \$1.35 to \$1.40 for quarter-blood staple, \$1.60 to \$1.65 for fine clothing and \$1.55 to \$1.60 for fine medium clothing.

Renewed interest has been shown in

Territory wools lately, especially in the three-eighths-blood grade, which has been in keen demand for government work. This demand has also extended to quarter-bloods of the better character. The former grade has sold readily at \$1.50 clean for the best lots, while quarter-bloods of similar excellence have easily brought \$1.40. So much interest has centered in Australian and other foreign wools, especially in all grades suitable for army contracts, that it has been difficult at times to interest manufacturers in either fleeces or Territories.

One of the big holders of Territory wools, possibly the largest holder in the country, is reported to have made a big turnover of original bag wools to a leading mill interest. The price paid was 54 to 68 cents in the grease, the scoured value being estimated at about \$1.65. It was reported that the same parties were dickering for a lot of 2,500 bags of original Montana wool, but that the buyer and seller were apart as to the price.

Fleece wools have shown little activity during the months, scattering sales of medium grades, mostly combing, with an occasional small lot of half-blood clothing, at prices on practically the same basis as has been quoted for the past three months. Current quotations on Ohio fleeces in this market are 82 to 85 cents for fine washed delaine, 76 to 78 cents for XX and above, 75 to 76 cents for fine unwashed delaine, 65 to 66 cents for fine unwashed clothing, 77 to 78 cents for half-blood combing, 76 to 77 cents for three-eighths-blood combing, 75 to 76 cents for quarter-blood combing, and 68 to 70 cents for medium clothing.

Fine scoured clothing Cape wools have developed relatively more weakness than other grades, either foreign or domestic, some shabby lots of short wools selling at \$1.30 to \$1.35. Fine combing Capes were quoted at \$1.70 clean at the beginning of the month, but are now quoted at \$1.65, short combing or French combing wools selling at \$1.60 and the better grades of fine short clothing wools at \$1.50. Scoured Capes have sold at \$1.30 to \$1.45, according to whether they were

Colonial or locally scoured. American buyers are doing very little at the Cape, owing to the traffic situation, which is extremely difficult. The British government has yielded to the wishes of a section of the farmers and has allowed them to withdraw the wools previously pledged to the government. Japan has been the principal customer of late for these wools, as she has been able to supply the necessary shipping, which this country cannot yet do.

Receipts of foreign wool have continued heavy, the total receipts for the first two months of 1918 being 74,128,-505 pounds, of which 14,023,079 pounds



Five Lambs Raised on One Heifer at Antelope, Oregon

were domestic and 60,105,426 pounds were foreign. This compares with a total of 67,941,431 pounds for the same period in 1917, of which 12,389,293 pounds were domestic and 55,552,138 pounds were foreign. Shipments of wool for the same period were 40,481,-774 pounds, compared with 55,901,984 pounds for the same period in 1917.

SHIPPING LIVESTOCK BY EXPRESS

Boston, Mass.—A carload of 28 fat cows and bulls was shipped by express from Omaha on January 22 to a dealer at Brighton, Mass., to fill an order for live cattle to be slaughtered for Kosher

purposes. This novel means of making the shipment was adopted to avoid delay due to bad weather and to freight congestion in the East. At the same time the shipment was made it was expected that it would reach Brighton in about forty-eight hours with only one stop at Cleveland, Ohio, for feed and water but the representative of the Bureau of Markets in Boston reports that it did not arrive until 3:45 p. m. January 28 when an express shipment from Chicago also was received. A few days later two additional cars were received by the same dealer via express from Chicago. The cattle in the shipment from Omaha were given two feedings enroute and when slaughtered dressed an average of 754 pounds to the carcass. Those received in the first shipment from Chicago averaged 903 pounds dressed weight.

PAYING \$5.00 PER POUND FOR YARN

I note the little leaflet you sent me in regard to the cost of yarn. We are paying here \$5.00 for knitting yarn and I think this is simply an outrage for any one to make off the people as much as they are doing in times like this. Yarn should be sold almost at cost. I am buying and have ever since this horrible war commenced, \$25 per month for the Red Cross in some kinds of goods. The last two months I have given that for yarn. But I am getting tired of paying such a price when one knows it is an outrage. (American graft and greed will lose this war yet.)

I wish something could be done along this line for we must have the yarn and all we can get. Cannot you give me the name of some knitting mill that I could place my orders with and save something. I could buy almost half as much more if the mills would sell that way. Let me hear from you on this matter at once.

Both of my sons, Ben and Mac, are in France now, none of the others have been drawn yet.

MRS. R. A. JACKSON,
Dayton, Wash.

Sheep-Killing Weather on the Winter Range

By J. CECIL ALTER

In a recent study of the relation between the weather and the amount of sheep feeding necessary in various winters, the conclusion seemed unavoidable that if more feeding were possible particularly in the autumn and early winter when needed to sustain a given condition, the late winter losses would be appreciably lessened, regardless of the severity of the weather, or the presence or lack of snow cover on the range.

That is, as a general proposition, it seemed safe to assume that a healthy sheep with a good fleece of wool on his back, having access to feed and water, is practically weatherproof; and no ordinary circumstances of weather, in themselves, appear sufficient to prevent a sheep in such circumstances

these elements as they prevailed in those winters, could make those winters quite so disastrous and important in the history of the sheep industry.

Therefore it seems that a sheepman cannot purchase cottonseed cake and hay for winter use from these data as safely and as wisely as he might by their use purchase coal for his furnace several months in advance.

Endeavoring further to make answer to the inquiry as to what it is that kills the sheep, with all the data at hand we conclude that the sheep which gets stuck in a snow drift, lost in the storm, trampled upon, crowded away from the feed, or actually freezes in his tracks, has been weakened by lack of feed or other cause covering a con-

In the winter of 1902-3 the snow covered the ground for about 85 days, there being approximately 50 days in succession, from January 28th, during which period the principal losses occurred. In 1916-17 the snow cover appeared in one period of time, beginning about December 6th and continuing for about 78 days.

The duration of the snow cover depends almost entirely upon air temperatures and not upon the depth so much, as will be seen from the data on the charts. A very few days with maximum temperatures in the forties will cause a foot of snow to disappear; and such days, while not common in January, have occurred in all months. Therefore a deep snow coming between December 20th and the close of

RECORDS OF WINTER WEATHER IN UTAH, FAVORABLE AND UNFAVORABLE TO SHEEP

Average 1891-1917	Winter 1902-3			Winter 1904-5			Winter 1908-9			Winter 1911-12			Winter 1916-17		
	Dec.	Jan.	Feb.	Dec.	Jan.	Feb.	Dec.	Jan.	Feb.	Dec.	Jan.	Feb.	Dec.	Jan.	Feb.
Temperature	26.1	25.6	29.4	27.0	27.0	16.6	28.8	28.9	30.5	25.4	31.9	29.5°	23.4	27.6	33.3
Snowfall	8.8	10.6	9.8	6.8	8.5	7.4	6.8	6.1	8.6	8.1	12.2	18.6°	10.1	5.0	6.0
Stormy Days	5	6	6	4	5	4	4	5	7	4	8	7	5	3	4

from adding his bit day by day to his mutton and wool inventory.

In seeking the answer to the question, "How long a period of feeding should be expected in an average winter," we made comparisons of weather statistics for all years available in Utah, and especially for the years that were considered particularly favorable or unfavorable for sheep, as shown by general reports of condition and losses.

From this study it was apparent that the severity of a winter is not measured directly by its temperatures, its total snowfall, or the number of its stormy days, as may be seen by comparing the data herewith in the winters of 1902-3 and 1916-17, which were particularly hard on sheep and other stock on the open range, with similar data for other years, and for average winters.

These elements singly, or in combination, undoubtedly affect the number of the losses, yet no general effect of

siderable period of time, as a pretty general rule.

This lack of feed is usually due, apparently, to having the storehouses of winter feed locked against the sheep by an extensive and long enduring snow cover, or by the extreme dearth of moisture in the form of snow over wide areas stretching considerable distances from natural moisture sources over the range.

This conclusion appears to be supported by the accompanying chart of snow layer depths and duration, compiled from daily observations made by Mr. Walter James, Co-operative Weather Observer for the U. S. Weather Bureau at Government Creek, Utah, who is also a leading stockman of Tooele County. A careful comparison of these data with similar records made elsewhere shows them to be fairly representative in a general way of conditions prevailing over western Utah as a rule.

January, which is approximately the midwinter period in this district, is quite likely to be of long duration. Deep snows in February or early December are not likely to remain on the ground long.

Losses of sheep, not disastrous, but fairly general, in the winter of 1911-12, were largely due more or less directly to lack of moisture on the range. The snows were neither heavy nor of great endurance that winter. Usually when snows are light, coming in storms of little importance, they are comparatively limited in extent over the ranges.

Apparently if the vitality of the herds could have been maintained at a high state until the middle of January by feeding or sheltering in 1903 and 1912 they could have much better withstood the subsequent stress of widely different kinds of weather in the two years.

If a normal amount of snow cover

March, 1918

and other winter conditions are expected, and plans for feeding are made accordingly, such as would bring the sheep through the winter in a fair condition at a minimum of cost for feeding, it is easy to see how the occurrence of such a late winter as either of those just mentioned would prove the feeding economy to be a very expensive practice.

General reports indicate that in the winter of 1904-5 the snow fell in about the right intervals and amounts and obscured a minimum of the range feed, for the feed afforded ample sustenance for livestock that winter, the animals

vent its execution by weather conditions.

February, 1903, was bitterly cold, this circumstance doubtless adding to the suffering of the stock in the deep snows of that period, yet February, 1902, the previous year, was unusually mild and pleasant, and stock suffered and many died for want of moisture on the range. Only the stronger animals can survive such trials.

The character of a coming winter or of a single month cannot be predicted, but it is safe to predict that a sheep which reaches January in a hungry, emaciated condition will be among the

not believe it can be beat. By changing the crayon on bucks to a different color, blue and black, or whatever you desire, every four or five days, you know exactly the percentage of ewes you expect to lamb every 24 hours and can provide for them. Bringing your ewes to the shed in rotation prevents over-crowding at any one time. We do not do a great deal of shed lambing in this state, but I noticed those who used the device around here last year continued to do so this year, as they can lamb with less help. By cutting the band in two everything is given a better chance, for a smaller band is easier to handle, good weather or bad.

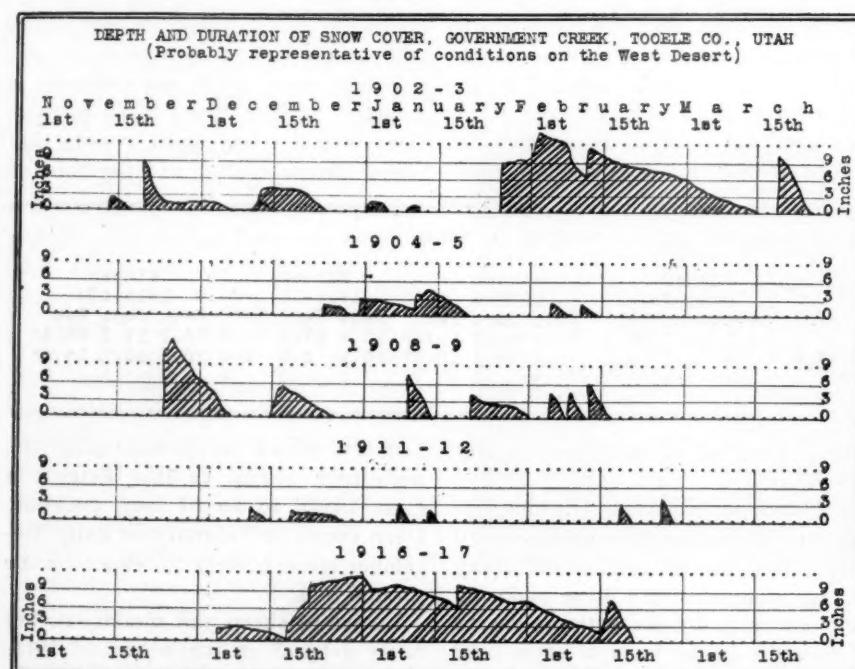
H. PEARCE, Wyoming.

NOT FURNISHING STOCK CARS

Mr. McAdoo, in charge of the car service of the country, late in February issued a statement in which he said that Mr. Hoover had issued orders to furnish livestock shippers with only 75 per cent of the stock cars that they ordered. Stockmen throughout the corn-belt have been unable to get sufficient cars to move their fat stock, and it now would appear that Mr. Hoover was deliberately trying to prevent this stock from reaching market. We have believed all along that this country had more than an adequate supply of live-stock.

640-ACRE HOMESTEADS

We are advised that the Department of the Interior has so far designated for entry under the 640-acre homestead law about 1,100,000 acres of public land. Of this 933,000 acres have been designated in the eastern tier of counties in New Mexico and the other 117,000 acres have been designated in North Dakota. While considerable land has been examined in other states, the examinations have not as yet been passed on. In Idaho most of the 640-acre filings have been examined and within the next thirty days some of these lands will be designated as open to entry.



having wintered well and emerged in the spring in good condition with small losses.

The snow cover that winter persisted for about 28 days at Government Creek, there being about 19 days in succession, which were in early January, a time before the animals had felt the severity of the winter particularly.

If the summer feed has been short, and especially if the winter range has received less than the usual amount of rain in late summer and autumn, the sheep that is being sent onto that range to winter, needs all the more assistance from hand feeding to pre-

first to perish in a deep snow period or a disastrous drought thereafter; hence the extra layer of fat maintained by the oil cake and hay of the early winter or the autumn may permit its bearer to pass in review before the forest ranger at the gateway to the summer range.

FOR MARKING EWES

I can gladly recommend the Universal Marking Device as I used it this year and it gave better satisfaction than I expected. I intend using it from year to year. For shed lambing I do

Increasing the Forage on Western Range

By M. A. SMITH

There is no doubt that at this time one of the most important things to the increased production of livestock, in the Intermountain region is the increasing of forage on the Western ranges.

It is my opinion that there is an abundance of capital and skill evident in the West to increase the livestock products to a great extent in a very short time if the necessary grass was in existence. For lack of grass the livestock industry must and will remain about stationary until some practical speedy way is found to artificially improve the range by reseeding with both native and domestic grasses suitable to the particular locality.

As it is a conceded fact that practically all private ranges as well as public ranges both in the forest reserve or out of it are fully stocked, and any increase in one class of livestock under the present conditions can only be done to a very small degree without decreasing the other class.

During the last ten years I have made extensive personal experiments on reseeding ranges to domestic grasses. These ranges could be classed as summer ranges varying from 7500 feet to 9500 feet altitude. During this time these same ranges have been so used as to increase the forage that is naturally native to the district by allowing the vegetation to retain natural seeding. I will at this time only discuss the reseeding with the domestic grasses and the results. Orchard grass has given the most satisfactory results, it being adapted to grow in among the timber where shade is quite intense; bromegrass also showing good results. Timothy was found very satisfactory on the meadow lands and in the open places among the timber, and along the bottom of the hollows where sunshine and moisture is sufficient. Alsike clover gave very satisfactory results in the meadows where water was prevalent, making rapid growth, thereby furnishing a great amount of feed. The white clover also

proved to be hardy, and gave gratifying results, furnishing somewhat less feed than alsike by reason of being slower growing. I am convinced that the reseeding of all summer range can be done at a reasonable cost and should increase the carrying capacity of a range from 25 per cent to 50 per cent over what the same range will do where only the native grasses grow, even though the native grass is developed to its full extent; the reason the domestic grasses will make this particular improvement is from the

have approached the ripening stage, even though the foliage is grazed off, while many others show a tendency to produce entirely too large a portion of weight in the seeds and a deficient amount of foliage, thereby failing to furnish the desired feed.

My experience extending over a period of thirty years has given me an opportunity to see some of the best virgin ranges in the West overstocked and deteriorated until they were practically denuded of all vegetation useful to livestock. I have also seen these same



Cut Out the Blacks Before Shearing

fact that these grasses I have heretofore mentioned will continue to make second growths, or new growths during the whole grazing season, while the native grasses all show a characteristic to have but one growth, maturing a seed stem and hibernate for the balance of the season, this being due no doubt to the environments of weather and climatic conditions existing for generations. Few of these native grasses have a very long life, probably three to five years, thereby requiring the frequent seeding to maintain their productiveness. So far as my observation extends there isn't any of them in Utah that will make a satisfactory new growth after the seeds

ranges remain unused until they had wholly or partly regained their natural productiveness. Very few, if any, ever regained their original condition, as many obnoxious weeds useless for grazing become mingled with the vegetation that was useful, and were able to maintain their permanency among the valuable herbage.

The time required to make these said improvements was five to ten years. It appeared to me that they could have been brought back to their full productiveness with a small amount of these domestic seeds in 50 per cent of the time that it takes for a range to do this work by its natural reseeding. And I wish to say

that the greatest of care should be taken to sow pure seeds and not introduce some of the many obnoxious weeds such as the Canadian thistle, Russian thistle, or any other such weed upon these ranges which would have a very detrimental and disastrous effect on the pastures of our mountains. We now have large tracts of ranges that are being heavily infested with these weeds and the damage they will eventually do is beyond the comprehension of most people.

I have suggested many times to the forest officials the feasibility of improvements of the ranges embraced in the forest reserves with some domestic or improved grasses; however, they have not as yet been very active in improvement of the forage only from the one source, the natural reseeding of the natives grasses. While this policy is proper for temporary purposes I am convinced that with a very few experiments it can be fully demonstrated that more permanent grasses can be found and successfully established than many of those that are now in existence upon the forest reserves.

It is to be hoped that active interest will be taken along this line in the near future by the government.

I have also done some experimenting on the lower ranges consisting principally of early spring ranges, but have not carried it on to a sufficient extent to have demonstrated the practicability of any definite policy, as there are no domestic grasses to my knowledge that will stand the arid climate these low ranges are subject to, which includes those below 6,000 feet to as low as 4,000, which is the minimum elevation for the ranges in Utah; however, much can be done for the improvements of these spring ranges by grazing them only in their proper season and to proper capacity the same as must be recognized with the higher ranges if their full utilization and production is maintained.

DESIGNATING HOMESTEADS

In response to your request for a statement about the amount of classi-

fication required by the stock-raising homestead act of December 29, 1916, and progress made in this work:

About the first of last August the Commissioner of the General Land Office reported that about 62,000 applications had been made under this act for approximately 24,000,000 acres of land. According to the commissioner's report there were at that time slightly fewer than 12,000 applications in Montana for somewhat less than 4,000,000 acres of land; slightly fewer than 13,500 applications in New Mexico for about 5,740,000 acres of land; and more than 10,000 applications in Wyoming for somewhat less than 4,200,000 acres of land. These are the three states in which the largest number of applications have been made.

The Geological Survey began the organization of the field force necessary for the examinations required by this act in July of last year. Since September it has had a varying force of from 75 to 100 men at work in various districts. These men began their work in the Northern states—the Dakotas, Montana, Idaho, and Oregon. As the season advanced these parties were moved south. Work has now been done not only in the states mentioned, but in Wyoming, Colorado, Utah, California, and New Mexico, and a beginning has been made in Arizona. About 4,000,000 or 5,000,000 acres have been examined and a little more than 1,110,000 acres have been designated for entry. Two states are affected by the designations thus far made. One hundred and seventeen thousand and eleven (117,011) acres have been designated in North Dakota and 933,671 acres have been designated in New Mexico.—Department of the Interior.

SECOND ANNUAL FAT STOCK SHOW

The dates for the Second Annual Fat Stock Show at the Salt Lake Union Stock Yards, North Salt Lake, are definitely announced as April 4th, 5th and 6th. A feature of the show will be the selling by auction of the Shropshire yearling wether Grand Champion of

the National Western Stock Show, Denver, 1918, for the benefit of the Red Cross. The sheep was bred by A. J. Knollin, Pocatello, Idaho, and is pictured in his advertisement in this issue. This wether sold in Denver at the record price of 50 cents a pound and was purchased by the Intermountain Stock Show Association and is to be sold by them in behalf of the Red Cross. The management of the Intermountain Stock Show Association earnestly hopes that the sheepmen will respond as liberally at this sale as they have heretofore at other sales for this cause. Besides the prizes offered by the stock show association, special premiums have been offered as follows:

CARLOADS FAT SHEEP SPECIALS

National Wool Grower Special

The National Wool Grower, of Salt Lake City, Utah, offers a special premium of \$50.00 for the best carload of Fat Lambs exhibited in the Show.

M. K. Parsons & Co. Special

M. K. Parsons & Co., of Salt Lake City, Utah, offers a special premium of \$25.00 for the best carload of Fat Lambs exhibited at the Show.

Clay, Robinson & Company Special

Clay, Robinson & Company offers a special premium of \$25.00 for the best carload of Fat Lambs exhibited at the Show.

Salt Lake Union Stock Yards Special

The Salt Lake Union Stock Yards, of North Salt Lake, offers a special premium of \$25.00 for the best carload of Fat Lambs exhibited at the Show.

Cudahy Special

The Cudahy Packing Co., of North Salt Lake, offers a special premium of \$25.00 for the best carload of Fat Lambs exhibited at the Show.

Utah Packing & Provision Co. Special

The Utah Packing & Provision Co., of Salt Lake City, offers as a special premium \$25.00 in Baby Bonds for best carload of Fat Lambs exhibited at the Show.

Now that the postage is three cents, it is rather expensive to write letters about dues. The better plan is to mail us a check for \$5.00 now.

SHEEP RAISERS

of Utah, Idaho, Colorado,
Montana, Nevada

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The great opportunities for profitable
sheep raising in

THE HIGHLANDS OF

LOUISIANA

IN Beauregard and Vernon Parishes [Counties] of Southwestern Louisiana, we have for sale several hundred thousand acres of land heavily grown to sheep-fattening grasses, worthy of the personal inspection of every Western sheep raiser. This vast area is green with nutritious feed nine months of the year, has ample and well distributed rainfall with plenty of pure drinking water requires no fences or big herding expense, is free from destructive animals and by reason of mild climate but a limited outlay for shelters and maintenance is necessary.

Practical sheep men who have seen this section of Louisiana, pronounce it admirably adopted for commercial sheep raising and the coming country for Western ranchers.

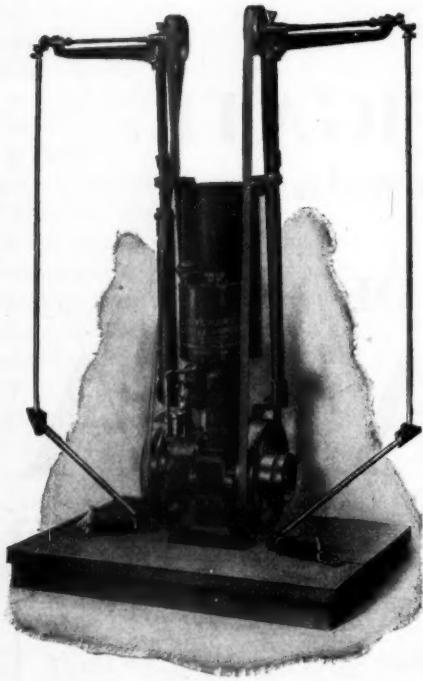
Our book entitled, "Where Soil and Climate Are Never Idle," describes and illustrates the lands fully. Ask for it. It will be sent free to you and by first mail.

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Fourth Floor R. A. Long Bldg.

Kansas City, Mo.

The Stewart Little Wonder SHEEP SHEARING MACHINE



THE illustration here shows our Stewart Little Wonder 2-Horse Power Engine fitted for shearing sheep. This outfit has been on the market for ten years, and these machines are in use in Australia, New Zealand, The Argentine, Brazil, England, and other wool-producing countries, as well as in the United States.

For the man who has from 500 to 2,000 sheep to shear, nothing could be more practical or handy for the shearing. With it two men can shear from 200 to 400 sheep a day.

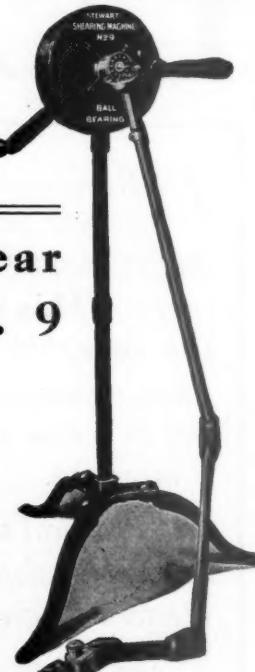
One of the shears, or both, may be used, and either can be thrown in or out of gear by a simple stroke of the hand.

When shearing is over, the shearing equipment can be taken off and the engine is ready to do any other work that a 2-horse power engine can do.

Stewart Enclosed Gear Ball Bearing Shearing Machine No. 9

Weight, boxed, 50 pounds.

This is our latest and greatest hand-operated sheep shearing machine. Stewart shearing machines have always stood first, but no machine that we have ever been able to offer approaches this in perfection of mechanism, ease of operation and perfect shearing results. Twenty years of experience and the most thoroughly equipped factory in the world have gone to produce this machine. Thousands of dollars have been spent in experimental work under the direction of the ablest and most skillful workmen. We have never hesitated at any expense if it promised success and we are glad to offer this new machine as the masterpiece of all our efforts—the culmination of twenty years of inventive and studious labor.



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the Salt Lake Ram Sale.**

Registered Hampshire and Cotswold Ewes



One of My Ram Lambs.

I offer for sale in January and February 400 Registered Cotswold Ewes, ranging from 1 to 4 years old, and 700 Registered Cotswold Ewe Lambs. We also offer 100 Registered Hampshire Ewe Lambs.

**J. R. Allen
Draper, Utah**

March, 1918

THE NATIONAL WOOL GROWER

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The National Wool Grower

Published Monthly by the National Wool Growers Association Company, (Incorporated)

Published at 718 McIntyre Bldg., Salt Lake City, Utah

Edited by the Secretary

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THE WOOL SITUATION

A representative of the National Wool Growers Association has been in Washington since February 20 and will remain there for some time to come. It was thought by many Western wool growers that some first-hand information should be obtained as to the government's policy regarding the next wool clip. To sum up, this seems to be the situation on March 6:

At this time no legislation exists under which the price of wool could be fixed. Without such legislation, the only way the price could be fixed would be by securing an agreement with all the wool growers and manufacturers to accept a certain price for wool and in honor buy and sell on that basis. On the face of it, this is out of the question, for there would be so many conflicting interests to deal with that such an agreement could not be carried out. No bill is pending before Congress that gives authority to fix the price of wool and the sentiment is that unless such a bill received the active support of the President it could not be passed. So far as we can learn no department of the government is even considering fixing wool prices and we do not believe the wool grower need fear such action.

No contracting has been done in any section up to this time and we anticipate none for thirty days, at least that is our hope.

There is a sentiment among public men that any effort on the part of wool growers or dealers to force the price of wool to an unreasonable level would result in some kind of governmental action. We believe, however, that there

will be no disposition to force wool higher.

The Boston wool market seems to be on a steady basis. Wools have maintained the same value for several weeks past. We see no reason why wool prices should either advance or recede during the season.

THE MEAT SUPPLY

The U. S. Food Administration on March 1 issued an order permitting the use of lamb and mutton seven days in the week. As a result of the restricted demand for lamb the feeders have been losing around \$3.00 on each lamb fed and some of them were faced with bankruptcy as a result. It may be answered that the feeder paid too much for his feeder lambs last fall and that he was entitled to a loss. In a few cases feeder lambs sold too high, but the bulk of feeders brought no more than enough to let the producer out whole. Had feeder lambs been bought at 15 cents the feeder would not have broken even at the prevailing price of fat lambs. Anyhow fed lambs rose to over \$20 a year ago and the feeder had a right to expect as high a level this year, and he would have received it only for the propaganda against lamb. Let us hope we have heard the last of it.

WHY NOT LIVESTOCK

By reason of the war thousands of absurd theories have been presented to an unsuspecting public through the press and in many cases given undue prominence. As an illustration, a leading periodical recently published a lengthy story advocating the raising of

elk and other game animals in our National Forests for the purpose of increasing our meat supply, the idea being to set aside and fence a portion of each forest as a breeding and fattening ground for wild animals. Certainly this would result in withdrawing just so much land from the use of other livestock and to such an extent would decrease our supply of domestic meats. No wild animal can compare with a domestic animal as a producer of meat. If it could, then civilization is a failure and we have not progressed any since the stone age. For some thousands of years the human race has been busy increasing the productiveness of its sheep, cattle and hogs. Originally all of these animals were wild and unproductive just like the elk and deer of the present day. The forage that would be required to support a deer will support a sheep; that which would support an elk will support a steer. The sheep or the steer will produce many times the amount of meat that could be derived from the deer or elk, and what is equally important, the meat from the domestic animal is far more palatable. One or two meals of venison are about all anyone would care for. The wild animal is not nearly so prolific as the domestic animal, nor is it so hardy.

There is not a single reason for the propagation of these wild animals except to satisfy the esthetic taste. The forage required to produce a pound of meat from wild animals will produce five pounds of better meat if fed to domestic animals.

A WOOL MARKET REPORT

Mr. C. J. Brand,
U. S. Bureau of Markets,
Washington, D. C.

Dear Sir:

Referring to my request of last week that your department issue a weekly report of the Boston Wool Market and publish the same in each of the Western states on one day of each week, I beg to submit the following facts.

At present none of our papers carry an intelligent report of the wool mar-

March, 1918

ket that is useful to wool growers. The present press reports give occasionally the value of the different grades of wool on the scoured basis, but the wool grower sells his wool on the grease basis and it is difficult for him to translate scoured values to grease values. While, of course, the scoured values of wool furnish the basis for grease values, the difficulty of translating them confuses the grower. We have in Boston certain established grades of wool and it is these that the growers understand best and, in a general way, they know the particular grade of wool which they are producing. The report which we desire of the wool market should therefore be based upon existing Boston grades.

Our Western wools are marketed by the growers ordinarily between March 1st and August 1st. If your department, therefore, would issue, during this season, from some central point in each state, once every week, a report of the prices on the different grades of wool prevailing that week in the Boston market it would place the grower in a position to obtain nearer the market value when he sells his wool.

Necessarily such a report would require that your department place a specialist in Boston to collect these data during the wool selling season. Such an official would necessarily have to be fairly well informed upon wool market practices, but he would not need to have any technical knowledge of wool, itself.

The grades of wool in which our Western growers are most interested are fine combing, fine clothing, fine medium combing, fine medium clothing, half-blood combing, half-blood clothing, three-eighths blood, quarter-blood, and braid.

The shrinkage of these grades differs somewhat in the different states and even to some extent in the different localities of the same state. The character of these wools differs in the different states, but, as a general thing, it may be said that in the same state the wools are ordinarily more or less similar in character. Hence, it is nec-

essary that each state have a report of its particular grade and character of wool. The quotations that would cover Montana wool would be useless to the man in Utah and vice versa.

For the purpose of getting out an intelligent report, it would be necessary that the shrinkage of the different grades be determined, approximately, but this will not be difficult and we can readily obtain it. Of course it must be understood and reported that wools below and above the average in character and shrinkage would be worth more or less, as the case might be. In reporting it seems to me important to deal with the average grade and give the price thereof. I do not have before me a recent report of Boston wool values and therefore will not attempt to quote them correctly, but for the purpose of illustration we will assume that the values which I here give are approximately correct. The report we desire, it seems to me, should be issued somewhat in the following form each week:

"The United States Bureau of Markets issued today the following report of the Boston Wool Market for Utah wools on Saturday, March 1st. The values given in this report are for wools of average character and the value is based upon the shrinkage published in connection with each grade. The value of these wools in Boston on the week closing March 1st ranged about as follows:

Average	Shrink.	Cents
Fine combing	66 at 60 to 62	
Fine clothing	68 " 58 "	60
Fine medium clothing	64 " 59 "	61
Fine medium clothing	65 " 58 "	59
Half blood combing	62 " 62 "	64
Half blood clothing	64 " 60 "	62
Three-eighths blood	56 " 65	
Quarter blood	52 " 64 "	66
Braid	47 " 59"	

By issuing the report in this form, having it understood that the prices given are for average wools and by publishing the shrinkage on which the price is based the grower who has heavier wools, or wools above or below the average in character will be able to figure out approximately what his product is worth in Boston. He

knows the freight rate from his shipping point to Boston and the amount that should be allowed to cover commissions and, therefore, he will be able to estimate closely what he should receive for his wool on the range.

As growers we are not much interested in knowing whether the Boston market is active or dull for it must be understood that wool is a peculiar commodity in the activity that it may show upon any market. In other words at a certain season of the year no wool of some particular grade may be selling at all, simply because it is not the season when the mills require that particular sort of wool. That wool, however, may be just as strong in value as it ever was and will sell very readily when its proper season arrives. Another feature is that mills buy a supply of wool sufficient for maybe two months and naturally there may come a time when all mills will be supplied for their immediate demands and when not much wool would be moving in the market, while the wools would be moving in the market, while the wools would be worth just as much as ever.

The value of the coming wool clip will be close to \$175,000,000 and of this amount two-thirds will go into the territory west of the Missouri River.

We think that a report similar to the above should be issued weekly from some central point in each of the following states: Montana, Washington, Oregon, Idaho, Wyoming, South Dakota, Colorado, Utah, Arizona, California, New Mexico and Texas.

Our association will most heartily co-operate with your bureau in working out this proposed report and I will be at the Raleigh Hotel, Washington, for several weeks and shall be only too glad to call on you at any time you suggest.

Very respectfully,
NATIONAL WOOL GROWERS
ASSOCIATION.

S. W. McCLURE,
Secretary.

The wool grower who does not help his associations this year is not doing his share.

March, 1918

THE SHEEP INDUSTRY IN GREAT BRITAIN

By K. C. Ikeler.

Sheep raising in Britain is on a business and profitable basis. Anyone visiting the kingdom for the first time cannot help but be impressed with the magnitude of its mutton and wool trade, and the important part it plays in the old country system of agriculture. Both breeders and feeders alike find the handling of sheep most profitable. The demand created by an Englishman's appetite for mutton and the world wide call for both meat and wool has put the business on a firmer foundation than ever before.

The first thing in traveling from Liverpool to Aberdeen you pass through the historic Cheviot hills, which are literally covered with sheep carrying a preponderance of Cheviot blood. They appear extremely hardy and in many cases are making a highly useful and saleable product from land not well adapted to cultivation. A very noticeable feature about Cheviots is their tendency not to flock, but they graze spread over a much larger area.

The picture herewith was taken on the Kittybrewster market in Aberdeen when I was there the last of July. It well illustrates a group of crossbred Cheviot Leicester lambs, which are a very common type in the North country. These are lambs right off the heather hills in north Scotland and on their way to the London markets. The quality, size and uniformity of the lambs of this type are remarkable. Such lambs were topping the market and were in great demand by both killers and feeders.

In the higher regions of Scotland the Black Faced Highland breed prevails. One is surprised to find the great part this breed plays in the British mutton supply. This breed is used extensively in crossing with other breeds and especially with the Cheviot and Leicester. Such crosses have the hardiness and the thrift necessary for the grazing of the rougher heather hills and withstand weather conditions with little or no shelter. The lambs attain a

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good weight by fall and furnish an excellent quality of mutton.

In England the sheep business is handled in quite a different manner. That is, they are not grazed upon a large area of relatively cheap land. In the South country sheep are maintained in rather small flocks and graze upon some of the best pasture in the world. The flocks are frequently heralded which allows the lambs to graze in advance which keeps them practically free from parasites.

Many of the counties of England have their own particular breed of sheep. In fact one may frequently

see. However, the average tenant farmer who has had his pastures stocked to their limit is having little trouble about being asked to cultivate more crop.

London is a city with hundreds of acres of beautiful parks well set to permanent grasses which made first class pasture. Before the war these parks in summer were usually grazed by sheep to keep the grass down. At the present time these areas contain many hospitals and furnish recreation grounds for wounded soldiers. But even now one finds thousands of sheep grazing these parks that are occupied for



Crossbred Cheviot Leicester Lambs on the Aberdeen Market

know what county he is passing through by the breed of sheep he sees from the car window. However, they are usually thrifty and fat, and make a profit upon land worth from two to five hundred dollars per acre.

During the last year we have heard a great deal about many of these old pastures being plowed up for the production of grain. Most of the grass land that has thus been broken up is upon large estates where only a small percentage of its grazing capacity was being utilized. Many recreation grounds, golf links, and parks have been and are being put under cultivation, because they were not produc-

military purposes.

The more one studies the situation the more he is convinced that the sheep industry in Britain is doing its part in prosecuting the war to a successful conclusion for the Allies. The mutton and wool trade in this country will directly or indirectly go a long way toward the feeding and clothing of our own forces in France, two very important factors in the organization of an efficient army.

Now that the postage is three cents, it is rather expensive to write letters about dues. The better plan is to mail us a check for \$5.00 now.

WAR ON WASTE AREAS

By P. A. Ingavson.

Whereas the present World War has placed a supreme burden of responsibility upon this country to furnish food stuffs in vast quantities to the allied nations at war and the friendly neutral nations as well; and

Whereas at the present time there is the most acute need for animal products while the reduction in range areas, due to settlement coupled with the gradual deterioration of the public grazing grounds outside of the national forests as well as the retrogression of private pastoral land constitutes a serious menace to the national interests, and

Whereas the permanence and the future prosperity of the rural country is primarily dependent upon judicious methods for conservation of the soil and the products thereof, the following facts should merit the deepest interest and the most careful consideration of Western livestock men:

Enormous areas of Western stock ranges can be improved vastly in productiveness by certain artificial means and such might be accomplished rapidly in a very economical way through the employment of the following methods:

(a) Surface cultivation by the so-called "Argonaut" harrow at a cost of 35 to 50 cents an acre.

(b) Conservation and seeding of a great number of range species of grasses and legumes principally found on the native soil but a few introduced from abroad.

(c) Adoption of a comprehensive and economical system of management of grazing land.

Such a program calls for a quick resolute action and as a result the yield of pastures and natural meadows may easily be improved materially during the coming season.

Several extensive areas in the Intermountain region have already been prepared for such regenerative measures,—thanks to the progressiveness and patriotism of the owners. The work should be undertaken in co-operation with the Forest Service and it

behooves every individual concerned with the livestock industry to render whole-hearted support and the facilities of his own land to this movement which is, beyond doubt, of the greatest significance as the most potent factor in the stabilizing and standardizing the calling of the animal breeder as well as the common stockman.

Universally the trend of farming is bent toward intensified practices. The world today is about on the verge of starvation. Conservation of foodstuffs, and a complete utilization of land is urged everywhere in the nation. Indeed, necessity is a great tutor. Every acre, nay, every animal must be



What ten years of regulated grazing has done in restoring range badly over-grazed.

brought to account in the way of yield and production.

Of course much is being accomplished but still the problem is far from being solved. Every means of rational procedure must be sought for relief of the serious situation, through which the general system of rural industries ought to reach a permanent basis. Truly the systematization of farm practice, as well as the standardization of agricultural products is the highway of the future progress to an abiding success of rural life.

With arable farming carried to the goal of scientific rotation of crops and the animal industry well advanced, the present age has curiously enough left the care and cultivation of natural pastures and Alpine meadows very much

arrear. What is it but a flat business failure to allow the serious deterioration of the range to continue unrestricted, which condition, in the view of urgent demand and a supreme need for animal products, is becoming calamitous, and an omen for an impending economic crisis. The progressive stockman contemplates over the complex question and asks himself, "What could be done to increase the carrying capacity of my pastures, and how might I enhance the yield from natural meadows, formerly so rich and fair, now almost a dreary waste?"

When viewed in the light of modern practical experience, the answer comes very direct and explicit. There is only one way out of the difficulties. Apply the principals of dry farming, that is surface cultivation of the pasture or the meadow and reseeding of the ground at an opportune time.

Recently the Forest Service has come to realize the practicability of artificial reseeding. The consensus of opinion among specialists in grazing is that there are extensive areas within and without the national forests that might be profitably improved by such methods. Open tracts of the range which have been severely overgrazed although possessing a fertile soil recuperate too slowly if left to nature. But whenever such land is properly reseeded with native species, the seed of which may be readily obtained from reserved areas, the seeding should prove more remunerative than the average agricultural operation. Favorable comment upon light cultivation of the pastoral lands abound in agrostological reports dating three decades back but the experiments have been altogether too sporadic in their scope until very recently when a permanent project for research was established. The director of the field station at Ephraim, Utah, where the ecological range investigations are being conducted says in substance when describing range reseeding work carried on in the Northwest a few years ago: "The most conspicuous cause of failure is the lack of soil treatment; a factor chiefly operative in 61 out of 168 unsatisfactory experiments."

More recent in-

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THE NATIONAL WOOL GROWER

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vestigations at the Ephraim station substantiate the former evidence. In order to apply the principles of artificial revegetation upon private holdings the rancher must act upon his own initiative and conduct the work either in a co-operative way or individually. Progressives, like the Allen Bros. of Draper, Utah, and Mr. Clyde Lindsay of Ogden, are already commencing operations.

Old Europe and new Australia as well practice renovation of pastoral lands and reseeding under the most diverse conditions invariably with good measure of success.

The "Argonaut" harrow which is the Americanized name of an implement extensively used abroad is of very light construction and consequently convenient in operation but nevertheless it proves highly effective and serviceable. Instead of the brush harrow of the Romans or the still more primitive culture operation of the oriental nomad of centuries past, e. g., a drove of sheep so commonly employed by the Western rancher in working seed into pastures and natural meadows, the "Argonaut" harrow ought to come into general use. The advantages of its adoption in the West are most apparent upon the slightest investigation of its superior merits.

During the last fall season the "Argonaut" harrow was subjected to a thorough test at one of the Western state experiment stations. In the report of that trial the expert in charge of forage plant investigations of the station stated: "The 'Argonaut' harrow thoroughly and finely cultivates, levels, and smooths the soil. Stools of manure are ground up and thoroughly incorporated with the soil, a feature that has not as yet been given sufficient consideration. The parts are so flexible that both the low and the high places are cultivated, a distinct advantage over the ordinary harrow which has the tendency to form hard pan patches on the low places.

"It is a great saving of labor in that it cultivates, levels, and smooths plowed land at one operation. It is so constructed as to be easily weighted down to its full depth. In places in the

mountains, the sections can be easily detached and transported and packed on mules to places where there are no roads. The draft is so light that for a relatively large unit of the harrow even one horse would be sufficient on small farms."

For reseeding, several of the native range species of forage plants are of course, pre-eminently adapted and should be recommended and used in preference to exotic species of grasses and legumes. According to the findings of the U. S. Forest Service, the superior drought resistance and the high nutritive value of the native forage plants lead one to the belief that the regenerative measures have to be based chiefly upon such species found indigenous to their respective regions.

EAT LAMB.

Mutton and lamb may be eaten on meatless Tuesdays until April 15, in all states, by a ruling issued by the Food Administration, March 1. This ruling was put into effect in all states west of the Mississippi, and in Wisconsin and Illinois February 21, and has now been extended to include the Eastern states.

As a matter of fact, certain groups of the highly important species of Western grasses require from one-third to two-fifths less water in order to produce each pound of dry matter than do the species introduced from a humid climate, as for instance Kentucky blue grass, red top, etc. With regard to leguminous species, the same fact holds true and is fully explainable when one will consider the wonderfully vigorous root system of the native range plants and their marvelous leaf and stem structure and their unique manner to propagate asexually; e. g., by root stocks and from the nodes as well.

To anyone who has studied their economic merits, in fact to anyone who has an observant eye for nature, is it not perfectly clear that the capabilities of the grazing resources of the West

are far beyond the fondest expectations of the average stockman as he views the problem at present. Just as an illustration I shall enumerate groups of native plants that have come under my observation as being of especially great merit. Among the grasses 4 grama sp. 13 blue grass sp. 5 fescue sp., 4 wheat grass sp. 6 wild rye or lymes sp. while among the legumes suffice it to mention 17 clover sp. 9 trefoil sp. 11 lupines sp. 5 vetch sp. 19 vetchling sp. Besides all these the species of browse number no less than forty, everyone of which has a recognized merit. It is very doubtful if any equal area of this world has such resources of native forage plants endowed with almost unlimited possibilities for development and utilization under diverse conditions of soil, climate, and management.

Once when the livestock men grasp the significance of the tremendous opportunity and when there is created a nation-wide movement for reclamation of the rough ranges as well as the depleted meadows of the mountains, then first will the livestock industry attain its full efficiency and enter into its adequate relationship with arable farming. In fact such a program constitutes the only logical solution of the present day difficulties of the range industry.

Seed of the native species could be easily gathered in the late summer where conditions permit of such being done economically. For the purpose a special equipment will be required. The practice ought to be such as to include leguminous species as well as those of the grass family. Thus as a rule relatively larger yield of forage is produced and the soil is gradually enriched.

The field practice ought to be as follows: Immediately after the first heavy rains in the autumn, the pastures should be harrowed lightly. The process of cultivation is designated for loosening up the soil, renovating the roots of the vegetation, and for leveling the ground surface. The seeding is performed immediately after the cultivation has taken place. By spring the seedlings will get a splendid start

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in growth and, provided that the species have been selected with due care with reference to drought-resistance, the yield of forage will be increased enormously. Personally I have tried this system of range improvement during several years under quite adverse conditions of both drought and cold and I may testify that the methods brought highly satisfactory results.

Under this system progressive pastoral countries, like Australian commonwealths and several of the European countries, practice range improvement through extensive practice of reseeding and surface cultivation and such judicious efforts are generally attended with phenomenal success. Occasional spells of drought do not check the success of rational practice in which cultivation, and under certain circumstances, the use of mineral fertilizer, or the application of barnyard manure is resorted to.

Development of watering places on the range is another important problem. In many places a spring might be equipped for that purpose and thus a splendid new range would be rendered available, which at present cannot be used at all, simply on account of lack of watering facilities. There are vast areas throughout the range territory where a nominal sum spent for a pump, a pipeline and a watering trough would bear large interest and be the source of an untold wealth, if an adequate supply of water was provided for watering the stock which such range will carry.

A specially attractive field for development of the kind is to be found on the deserts of the Intermountain region. Due to light snowfall, the winter pasturage is quite sufficient but immediately with the approach of spring the difficulties commence. On the deserts the season opens about a month earlier than in the foothills of the mountains. Green grass appears and the buds of the browse species get swollen with sap. The conditions seem ideal for lambing of the ewes but, alas, there is no drinking water, and the flock must be driven into the chilly and bare foothills where Death takes his heavy toll. Such is absolutely unneces-

sary, in fact it is entirely without excuse to allow such loss to occur where it can be readily prevented.

Most commonly either a well can be drilled and water reached within a reasonable depth or a natural spring may be cleared and the water taken into pipes and led a few miles, thus serving a vast stretch of grazing grounds, and as a direct result lambing becomes ideally favorable in the desert. A considerable expenditure is fully warranted in developing adequate watering facilities on the pastoral runs. For instance, a pastoralist in Utah has recently laid six miles of water pipes on a desert range. Although the pipeline costs \$750 a mile he proclaims it to be one of the best investments he ever made in equipment.

By an increase of twenty to fifty per cent of the forage in the range districts, and by utilization of springs, the number of livestock could be materially increased and, as a direct result of intensified system in the husbandry the turnover becomes more rapid and profits tend to be greater than as under a regime of the past.

The preceding remarks aim to direct attention of progressive and enterprising ranchers of the West toward one of the most vital problems confronting them at the present time.

Under the situation that prevails throughout the range states the necessity for the inauguration of most approved practices in the management of the grazing lands is quite imperative, especially as the nation has to meet the demand for maximum production besides adjusting the intricate and conflicting relations between dry farmers and the pastoralists.

America has undertaken to contribute her grand share toward provisioning the world. Therefore let every resource be available and all practicable means sought in solving the problem.

LAMB FEEDERS LOSING

Montana stockmen are making strenuous complaints because of losses entailed through the circulation of reports that lamb meat has been tabooed

by the federal food administration. The consumption of both mutton and lambs meat has fallen off perceptibly until it is almost a drug on the market. The story has been denied by Mr. Hoover, but it is hard to offset the damage already done.

In an interview on the subject, Lee Simonsen said: "If the Western sheep raiser is given a reasonable price for his product, it will not be necessary to stock the pastures of the East with sheep, as is now being done. They can confine their efforts more exclusively to fattening cattle and hogs, for which they are better equipped than we are. This done, the West will supply all necessary lamb, mutton and wool.

"Lamb feeders of the West are losing millions of dollars because of the oversupply. Under present conditions each lamb shipped means a loss of \$1 or more. The lamb market should be 22 cents instead of 16½c if the raiser is to get out whole."—L. S.

LIVE STOCK ON FARMS
AND RANGES FOR

JANUARY 1, 1918 AND 1917

	Number.
Farm Animals Jan., 1918	Jan., 1917
Horses 21,563,000	21,210,000
Mules 4,824,000	4,723,000
Milch cows — 23,284,000	22,894,000
Other cattle — 43,546,000	41,689,000
Sheep 48,900,000	47,616,000
Swine 71,374,000	67,503,000
Total 213,491,000	205,635,000

	Value.
Farm Animals Jan. 1918	Jan. 1917
Horses \$2,248,626,000	\$2,182,307,000
Mules 621,064,000	558,006,000
Milch cows 1,643,639,000	1,365,251,000
Other cattle 1,780,052,000	1,497,621,000
Sheep 577,867,000	339,529,000
Swine 1,392,276,000	792,898,000
Total \$8,263,524,000	\$6,735,612,000

Now that the postage is three cents, it is rather expensive to write letters about dues. The better plan is to mail us a check for \$5.00 now.

Free Booklet

on Cloverland will be mailed upon request. Grazing conditions explained in full. Specific questions answered honestly. Write Marquette, Mich., office.

CLOVERLAND**Western Office**

This Bureau has established an office at 405 Continental Bank Building, Salt Lake City, Utah. Charles R. Hutcheson is in charge. See him personally.

[Cloverland is the 15 Counties of the Upper Peninsula of Michigan]

Grazing Lands

Offered at Introductory Prices and Terms

WESTERN OFFICE!

This Bureau, realizing that Western ranges are crowded and that some grazers may seek new homes, has established an office at 405 Continental National Bank Building, Salt Lake City, Utah. Charles R. Hutcheson is in charge. He can and will give full information regarding Cloverland grazing conditions, offers, etc.

FLAT FACTS!

The Upper Peninsula Development Bureau is a semi-public organization which operates without financial gain. It is backed by the fifteen counties of Cloverland.

The Bureau has investigated the grazing business here and has found that it is very successful.

The Bureau wanted to be absolutely positive that it was right in backing grazing propaganda so it had Frank J. Hagenbarth, President of the National Wool Growers Association, look over the country from a grazer's standpoint. Mr. Hagenbarth is the best authority in the world on grazing conditions. This was his decision:

"CLOVERLAND IS THE BEST LIVESTOCK AND DAIRYING COUNTRY IN THE UNITED STATES IF NOT IN THE WORLD. YOU CAN CARE FOR 8,000,000 SHEEP AND 1,000,000 HEAD OF CATTLE."

The Bureau then conferred with the large land owners and got them to make great concessions in prices and terms on large tracts of land. Practical grazers can use lands free of charge for two years, pay the taxes during the third, pay the taxes and a rental charge based on six per cent of the purchase price during the fourth and fifth year. There are no strings on this offer. It is legitimate but open only to those practical grazers who first come here.

A booklet has just been issued by the Bureau which will be sent to any person writing for it. Questions will be answered and full information given to practical grazers who are interested.

SEVEN SOLID SHOTS!

1. Grazing is a SUCCESS in CLOVERLAND. It has been tried out for several years and pays big profits.

2. Large grazing tracts from 1,000 to 50,000 or more acres are set aside for practical grazing men.

3. Great concessions in prices and terms to stimulate the industry will be made by land owners to practical grazers.

4. Running rivers, sparkling springs or refreshing lakes touch EVERY grazing tract. Rainfall is abundant and droughts unknown.

5. Grass and clover is abundant and every acre will handle from one to three sheep during the eight months of grazing season. This vast food supply is now wasted.

6. Winter food is abundant, Cloverland exporting 130,000 tons of hay annually. Hay supply is near grazing tracts and much can be handled by teams.

7. Cloverland is within one day of Chicago by rail thus insuring lower rates, less feeding and less loss in weight than is the case with Western shipments.

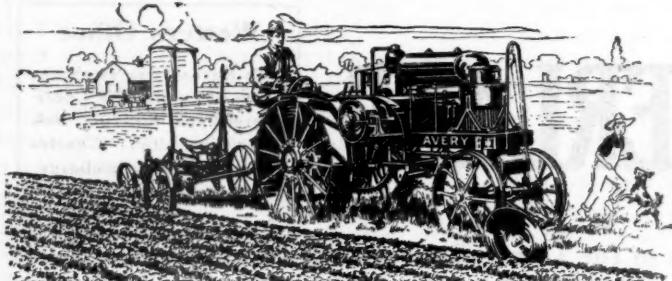
FACTS—Cloverland lambs NOT finished with grain, averaging 82 pounds are sold at top prices on the Chicago market. The average increase for the last three years has been 92 per cent.

MORAL—There are thousands of acres in Cloverland, covered with clover and grass which can be secured at low prices and good terms. The grazing business is a success, conditions are right and the people are willing to do everything possible to develop the industry. Isn't Cloverland worth looking over?

The Upper Peninsula Development Bureau

57 Bacon Block

Marquette, Michigan



"That's the Best Investment I Ever Made"

This is what Avery Tractor Owners are telling their neighbors every day. And here's why: They are able to do their work cheaper, easier and better than they did when they used horses, and to enjoy their farm work more.

By being able to plow deeper and at the right time they are raising larger crops. They have less chores every day—you don't have to take care of a tractor three times a day. And they save expense—you can't turn a switch and stop a horse eating like you can a tractor.

It's the best farm investment you can make—you'll never regret it. Come in and talk tractors with us today. We have a size Avery Kerosene Tractor for every size farm.

SOLD BY

LANDES & COMPANY, Inc.

General Agents,

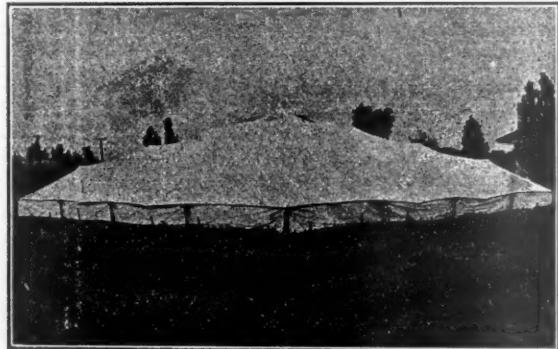
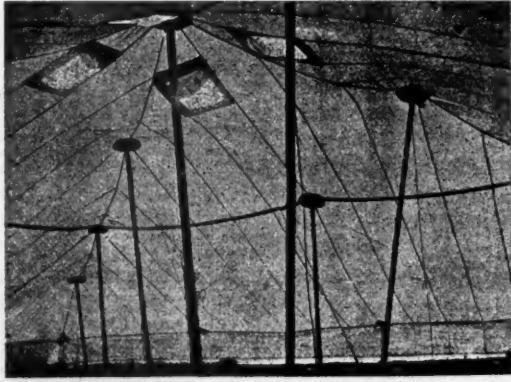
OFFICE AND WAREHOUSE: 2nd W. AND SOUTH TEMPLE

SALT LAKE CITY, UTAH



The "Red Seal" SHEEP TENT

One of these wonderful portable canvas sheds will cost you less than FIVE CENTS per head per season. AN YOU BEAT IT? How many lambs could you have saved last season with one of our tents?



DESCRIPTION: Made of 12 or 14 ounce duck, as ordered. Fully hand roped with best manilla rope. Size of tent 58 ft. x 58 ft.

Fitted with adjustable ventilators in roof. Stakes and poles as shown in cuts, are included. Wall 2 ft. 6 in. high. Jump ropes (or hold down ropes) on each quarter and center pole. Each tent will hold about 2,000 head of sheep. Tent will weigh close to 500 lbs., taking first class freight rate. Poles and stakes will weigh about 350 lbs., taking 3rd class freight rate. Two men can put up this tent in two hours. Tent is HIP ROOF style, which is the best style for strong winds. Our factory is busy and raw materials are hard to obtain. THEREFORE, if you want YOUR TENT at the RIGHT TIME, ORDER NOW.

Address The

Schaefer Tent & Awning Company

Exclusive Makers of "RED SEAL TENTS"

1421 Larimer Street (Dept. K) Denver, Colo.

THE NATIONAL WOOL GROWER

INCOME FROM 1000 SHEEP

A correspondent asks us "how much money may reasonably be expected as the gross income of a flock of 1,000 sheep with wool at 50 cents and lambs at \$9.00 each in the state of Idaho." There is only one sound basis on which to operate for the man who is in the sheep business to stay. That is, to carry over sufficient ewe lambs each year so that the entire flock will be replaced at the end of five years. By this method the bankruptcy item of depreciation is escaped. The average useful breeding age of a crossbred ewe is five years. Starting with two-year-old ewes, at seven years they are done from a range standpoint. Therefore, 20 per cent of the flock must always be yearling ewes. On this basis a band of 1,000 sheep should consist of 25 rams, 200 yearling ewes and 775 breeding ewes. The annual loss of sheep from natural causes is 6 per cent, and the loss on 775 breeding ewes would be 46, so the breeding flock must be further reduced to 729 head. Thus there remains that many ewes that may lamb each year. Assume, for instance, that an 85 per cent lamb crop is saved, though that is above the average, we have a return of 619 lambs. If 200 of them are retained to add to the flock, that will permit the sale of 200 ewes seven years old, minus the 60 that have died on the 6 per cent loss basis. This would leave 140 ewes and 419 lambs to be disposed of. The lambs at \$9 per head would return \$3,771. One hundred forty old ewes at \$8 would return \$1,120. Thus the gross returns from mutton would be \$4,891.

Now as to the wool. If the sheep shear eight pounds at 50 cents, the income is \$4 per sheep. The number of sheep to be shorn would be 1,000 head minus the 6 per cent loss, or 940 head. At \$4 each, the return from wool would be \$3,760. To this should be added the return from pelts. The 60 dead sheep would return say 30 pelts, as some are not skinned, and those that die after shearing are not worth skinning. On a basis of 50-cent wool the pelts would be worth \$3 each, or \$90. As the pelt value is due to the wool on

it, this must be added to the receipts from wool, making the total income from that source \$3,850. Thus the gross income from a flock of 1,000 sheep on a basis of 50-cent wool and \$9-lambs would be \$8,741. Therefore, 44 per cent of the income is derived from wool and 56 per cent from mutton. The average income per sheep would be \$8.74.

We agree that most sheepmen do not operate on this basis. As a rule, they purchase a flock of young ewes, run them as long as they will breed, and then dispose of all the old ewes and go out and buy another flock and start over. When they go out to buy they find they did not get within 70 per cent enough out of their old ewes to replace them with young ones. As a consequence, they often have to borrow 70 per cent of the money needed to make the purchase, while if operating on a basis of carrying over 20 per cent of their ewe lambs each year, they always have a flock of the same age as they started with, and in the long run are ahead.

WORD FROM CALIFORNIA

Concerning the sheep industry, beg leave to state that the demand for fat sheep has not been curtailed in this section of the country. Weather conditions are very unfavorable at present for livestock, this being one of the driest seasons for many years.

The lambing season is on now, and while a good percentage of lambs will be raised here, it is being done by feeding hay and grain, and that, of course, makes it rather expensive for our sheepmen.

The number of sheep in this country I would estimate at about 250,000, with a prospect for a good percentage of lambs. This estimate I am basing upon personal observation and inquiries made from various sheepmen in this section of the country. Trusting that this information is what you desire, I am with best wishes for the success of your association.

H. A. JASTRO, Calif.

Are the 1918 dues paid?

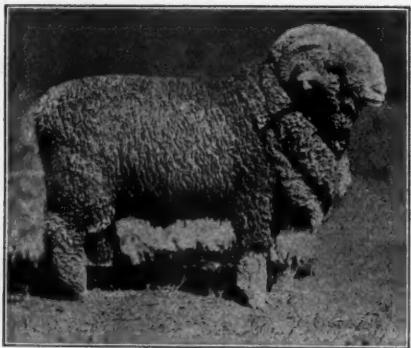
Designing AND Constructing

A modern shearing shed on scientific lines is something beyond the ability of the average architect and builder, because it is a life study which requires special training and long experience under widely varying climatic conditions. No one should ever attempt to build a modern shearing plant without first consulting an expert designer. Although all "Australian" shearing sheds are plain frame buildings and look quite simple when completed, every detail of the design must be correct and the measurements absolutely accurate, otherwise it will be impossible to eliminate unskilled labor and reduce working expenses. Easy and careful handling of sheep in modern shearing sheds depends entirely on a scientific distribution of light so that the sheep can "wrangle" themselves without help. With the exception of the floor, the cost of a modern shearing plant does not exceed that of an old fashioned shed of similar dimensions and the same output. In these modern shearing plants, wool can be packed ready for the mill without any additional expense, because the cost of skilled help is covered by the money formerly paid in wages to rough laborers.

Plans and specifications supplied
by

J. C. Findlay
Western Contract Company
508 Continental Bank Building
SALT LAKE CITY

March, 1918



One of My Stud Rams

CALIFORNIA RAMBOUILLETS

My Rambouilletts are large, smooth and well covered with heavy fleeces of long white wool. They are bred in a high, dry country and are very hardy. I have 2000 one and two-year-old rams for this season. If you visit California, call and see my flocks. My prices are reasonable and my rams will suit the range country.

**CHAS. A. KIMBLE,
Hanford, Cal.**



One of My Stud Rams

OMAHA SHEEP MARKET

Receipts of sheep and lambs for the month of February at Omaha were 165,052 head, or nearly 70,000 short of a year ago. It is questionable whether this shortage was due to any actual shortage of sheep and lambs in the country, and most dealers here are inclined to believe that it was due entirely to the shortage in stock cars. Certain it is that if the railroads had been able to furnish the country with cars as fast as they were needed the receipts last month would

have been several thousand heavier than they were. Most of the stock showed that it has been fed a little longer than usual as weights were heavier than they ordinarily are, and this was a bad thing for feeders because both packers and shippers have been discriminating against heavy stock for some time and favoring the lighter weights.

In general there is a better feeling in the trade than there was during the early part of February, and prices are anywhere from 25c to 50c higher than they were at that time. The better tone to the trade has been brought about partly by the fact that there is less apprehension of the government taking over the country's wool supply than there was a month ago, and the removal of the ban on mutton by the Food Administration has undoubtedly operated to broaden the demand for this meat. At any rate packers report a healthier demand in the East, and this has been reflected in stronger prices, particularly for lambs. Notwithstanding the uncertainty surrounding the market for fat stock, the country still shows its faith in the future of the market by taking thin and half-fat stock freely at rather strong prices. During the month of February the shipments to the country for feeding purposes were approximately 30,000 head, and of late this demand has been steadily improving.

Choice handy weight lambs are quoted at \$16.75@17.00, with heavy weights selling at \$15.00@16.50, and feeder lambs at \$15.25@16.75. Shorn lambs are going at \$11.50@13.50. Quite a few yearlings have been selling at prices ranging from \$11.50@14.50, and very few wethers at \$11.00@13.00. A good many ewes are coming, and the market has been healthy and strong for anything of this kind with sales at \$11.00@12.50, feeder ewes bringing \$7.50@10.50, and breeding ewes anywhere from \$10.50 to \$16.50.

The wool grower who does not help his associations this year is not doing his share.

Hampshires AND Shropshires

We are offering for summer and fall delivery Hampshire and Shropshire yearling rams; also some young Hampshire ewes.

All deliveries to be made in car lots or less f. o. b. Twin Falls.

We have a few extra good stud Hampshire rams for sale.

Brown Bros. Sheep Co.

TWIN FALLS - IDAHO

Get us a new subscriber.

WOOL GROWERS**LEAD THEM ALL**

We have received your check for \$10,375.00 as a contribution to the Harry Lauder Million Pounds Fund, derived from the sale of a ram at the National Wool Growers convention.

This is certainly a very liberal contribution from the wool growers. In fact, it is the largest contribution we have received from any separate interest.

We note that the collection amounts to \$11,300 and that in addition to check you sent us, \$200 was paid direct to Mr. Lauder by Mr. Butterfield and that the balance will be sent to this bank as soon as received by you.

I have sent your letter and the check to Mr. Lauder for his personal attention. I am sure he will write to these good people direct.

Assuring you of our pleasure in hearing from you, and thanking you in behalf of Mr. Lauder and those who will be benefited by it, I am, with kind regards,

JOHN A. NOBLE, Vice President,
Harriman National Bank.

SHEEP IN MICHIGAN

I have owned a flock of sheep here for three years and when I started the only sheep that I had definite knowledge of was "Mary's Little Lamb." I have had my troubles and lessons but my sheep made me money last year—and at that I did not get any of that eighty-cent wool price that I read about. In winter my flock has the run of sheds opened to the southeast. We feed outdoors in the snow. We are feeding roots and clover.

For an experiment last year I broadcasted one acre to purple top turnips and rutabagas and harvested five hundred bushels, and bought more at thirty cents a bushel. I bought my hay last summer from surrounding farmers at \$12 a ton but it is worth twice that now.

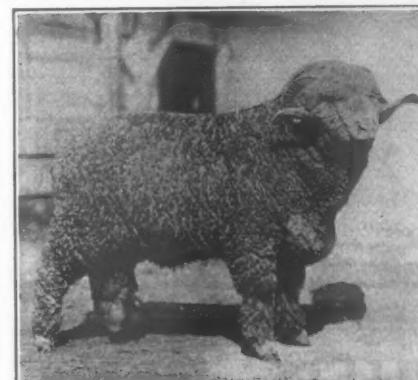
In the three years we have only lost two sheep killed by dogs, but the old gun is always handy and I never miss

THE NATIONAL WOOL GROWER

a chance to plant them deep if they come within range.

You will notice from my address that I am located in "Cloverland." I see that some of the Western men are looking this way—well, every man "Even a German," thinks he lives in the best country, but if some of the Western men stray into this country I will be glad to show them what we have.

CHEEVER BUCKBEE.

RAMBOUILLETS

America's Highest Priced Ramboillet Ram for which I paid \$1325.00 at the Salt Lake Ram Sale.

I am breeding registered Ramboillet rams of the most select type.

DELL PRATT, Moneta, Wyo.

Lincolns**We Breed and Import Rams and Ewes of the Right Quality**

Write or Come to See Us.
R. S. Robson & Son, Denfield, Ontario, Can.

Stud Rams RAMBOUILLETS Range Rams

Our Champion C. Ra at Frisco

We offer for sale a large number of registered Ramboillet stud rams and range rams. Will sell in lots of one to a carload. We invite your careful inspection of our stock.

TUCANNON RAMBOUILLET & STOCK FARM
Dayton, Washington



A band of 1000 purebred Lincoln and Cotswold Ewes. Bred from the best stock to be found in United States and Canada. Owned by Austin Bros., Salt Lake City.

**Rams
for
Sale**

Rambouillet and Hampshires

A. A. WOOD & SONS
Saline, Michigan



We are breeding big, smooth bodied, heavy wooled, open faced Merino Rams. A large number of choice Rams for next season.

L. U. SHEEP COMPANY
BICKIE, WYOMING

Are the 1918 dues paid?

H. L. Finch Soda Springs, Idaho

Woolgrower and Importer of Hampshire, Cotswold, Lincoln and Shropshire Stud Sheep.

Am Now Booking Orders For 1918 Importation

Write me how many stud rams you will want. I will put them down at Soda Springs, Idaho, for you, and if upon inspection you are not fully satisfied, you need not take the rams.

Stud Rams

RAMBOUILLETS

Range Rams



ONE OF OUR STUD RAMS.

We are breeding big, heavy wooled, hardy Rambouilletts and offer a large number of Registered Stud rams and range rams for 1918—500 head for sale. We also breed Registered Shorthorn Cattle of the highest quality.

QUEALY SHEEP CO., Cokeville, Wyoming.

WOOL TYPE CHANGING

Sydney, Nov. 28, 1917.

That omnipotent person, the Censor, having at last permitted the publication of wool trade statistics, I take this opportunity of expressing the textile industry's indebtedness to Dalgety & Co. for the carefully compiled figures which they have now placed at the disposal of those interested in our great industry. I am sure this acknowledgment will be endorsed by all wool men in Great Britain, America and Australia.

It appears to me that the most noteworthy fact brought home by statistics is the increase in the production of crossbreds, and, of course, the consequent proportionate decrease in the production of Merino wool. Nowhere is this increase more marked than in New South Wales, the one-time home of Merino wool. Some twenty years, or so, ago the proportion of crossbred wool produced in this state was but one or two per cent of the total production. It now stands at 18 per cent—an increase of 4 per cent in one year. I do not claim that the increase represents, from the manufacturers' point of view, wool of a thoroughly desirable character. I am inclined to just the opposite opinion. Circumstances make it so. The inducement to go in for crossbred sheep in New South Wales is not the wool, but the carcass: the lure of the frozen meat trade's higher profits. And to participate successfully in that branch of the industry one must have fattening land; land with the native clover, commonly known as "trefoil," and producing the wool man's nightmare, the trefoil burr. Burly Merino wool is bad enough, burly crossbred is just the limit. I heard a sheep owner say once that he was just prepared to bet a good sum of money on the result of half a dozen Merino lambs, and half a dozen crossbred lambs being turned into a burly paddock, in a given time the latter would gather four times as much burr as the former. One thing is certain, if you want to gather up burr in a paddock, turn in a flock of well-wooled cross-

March, 1918

THE NATIONAL WOOL GROWER

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bred lambs, and you won't be disappointed.

To return to the increased production of crossbred wool, Melbourne has increased one per cent, Geelong, Adelaide, Queensland are unchanged. The same is the case in New Zealand.

Briefly the production of Merino wool in Australasia has fallen from 63 per cent of the whole production to 57 per cent. And the production of crossbred wool has risen from 37 per cent to 43 per cent—all in a season. As New Zealand is unchanged the alteration applies to Australia. There is hardly any room for a change in New Zealand, where the production of crossbredwool stands at 97 per cent, and Merino at 3 per cent.—Wool Record.

FROM NORTH YAKIMA, WASHINGTON

Sheepmen have been enjoying the mildest winter ever known in Washington. Hay was bought at a high price last fall, but has not all been fed out. Very wet snow has spoiled a good lot of this hay. Many sheepmen have fed cottonseed cake on the range, it is hardly liked as well as corn or oats and some of it is of inferior quality. Sheep are all in good fix; grass is good which insures plenty of milk for the early lambing which commences the 15th of February. Wool will be nice and clean this year; no contracting of wool here. Shearing will commence the first of March.

H. S. COFFIN.

A GOOD WOOL CLIP

It is now reported that the 1918 clip of Australia is one of the best ever shown. This is accounted for by the fact that the season in that country is unusually good and feed abundant. As is always the rule when excessive feed is available the wool is much coarser than usual and of somewhat greater shrink. The great problem in Australia is to find shipping space for the wool. There is a demand in Europe for all this Australian wool, but lack of ships make its transportation doubtful.

Messrs. HICKMAN & SCRUBY, Court Lodge, Egerton, Kent, England

Export Pedigree Livestock

OF ALL DESCRIPTIONS
Specialty made of show herds, show
stocks, show horses for the Panama
Exposition.

Livestock is booming in North America, there is nothing to hinder importations required for exports from England, and the extra cost of insurance, freight, etc., is too small to make any difference.

Send for full particulars at once, if in a hurry, enquire by week end cabled letter. Americans ought to be importing bulls and rams by hundreds and we want to get busy.



One of Our Yearlings

Rambouillet — American Merinos

WE offer a large number of extra choice Rambouillet range rams as well as single stud rams.

We also offer American Merino rams in any sized lot.

Our rams are all rugged and healthy and have always given good satisfaction.

Everything sold for 1917 except 20 stud rams.

BALDWIN SHEEP CO. HAY CREEK, OREGON



One of Our Ewes.

RAMBOUILLET RAMS

Will have a fine lot of large boned, smooth bodied, long fine staple fellows for 1918 trade.

W. D. CANDLAND, Mt. Pleasant, Utah

RAMBOUILLETS



275 lbs. 300 lbs. 375 lbs.

Have sold all my Rams for 1917. I now have for sale 6 two-year-old and 4 yearling choice, home-raised, registered PERCHERON Stallions.

W. S. HANSEN
COLLINGTON, UTAH



I offer for this season 700 purebred Yearling Rambouillet Rams, and 100 two-year-olds. I invite you to see my flock.

C. N. STILLMAN
Sigurd, Utah

stack and range feed fairly plentiful assures us of a most favorable outcome of the spring. The growth of wool has been uninterrupted and the present conditions of our breeding ewes point to a strong per cent of lambs.

The time is here that more people are taking off their hats to the sheepman than in the past half a century, and perhaps since America was first known. Some cattle are styled "dual purpose" cattle—the sheep is the only "dual purpose" animal—is both to eat and to wear. I see in some late statistics that we have almost as many dollars invested in mules as we have in sheep—what a startling reflection on the prosperity of the farmers of our country. The wool grower has been "sandbagged" all along the line—when he should have had a government bounty to maintain his flock.

ARMSTRONG.

INCREASING THE DEMAND FOR HEAVYWEIGHT LAMBS

Boston, Mass.—It is a common practice of the retail buyer to pay a premium for light lambs averaging from 32 to 35 pounds. Often weight is the only consideration in buying lambs, quality being pushed into the background. Because of the unnecessary concentration of demand on lightweight lambs which at this time constitute a small percentage of receipts all heavier weights become a drug on the market. As a result the close of each week often finds an accumulation of heavy lambs some of which become stale from hanging too long and these heavyweights must be moved at a cut-price in order to clean up lots. By giving more attention to the heavier weight lambs the retailer could sell cuts to his customers at a lower price than that which he must charge for cuts from the lighter weight carcasses. A somewhat larger piece of meat could be taken away by each customer at no greater cost and a more ready sale of heavyweight lambs would benefit both the wholesale and retail trade and incidentally the consumer's pocketbook.

Are the 1918 dues paid?

THE NATIONAL WOOL GROWER

The wool grower who does not help his associations this year is not doing his share.

Sheep Land Bargains

The location of Marinette County, Wisconsin, on Lake Michigan gives us a longer growing and pasture season. That's a big factor in sheep farming profits. You are entitled to a free copy of our "special sheep bulletin." Write for it today.

SKIDMORE LAND CO., Dept. R., Marinette, Wis.

Bred Ewes For Sale

1250 medium wooled ewes bred to Hampshire bucks to lamb April 1st. 450 are two-year-olds and 800 are four-year-olds.

1250 medium wooled ewes bred to Delaine bucks to lamb April 15th. 425 are two-year-olds and 825 are four-year-olds.

FRANK W. SEATON,
Cascade, Montana.

HARRY THORNE, Sheep
JIM BALLARD, Cattle

Thorne & Ballard

General Live Stock
and Commission

Dealers in Livestock and Ranch
Property.

Roswell, N. M.

SHEEP RANCH FOR SALE!

Sheep ranch near Great Falls, Montana. A large, well equipped and excellently stocked property in going condition. A permanent and valuable proposition at attractive price. Address P. O. Box 753, Helena, Montana.

For Sale!

4,300 ewes, coming two to five years old, bred to half-blood Cotswold rams, lamb in May. April 1 to 15 delivery. For further particulars apply to

GEO. MILNE,
Aznoe, Montana.

If you love your Country,
Why not own some of it?

Wm. H. Kershaw

Dealer in farms and livestock, sheep range and cattle ranches, specializing in State and Government lands. All kinds of papers and petitions made that you wish to handle through the Salt Lake Land Office.

201-212 Ness Building,
Salt Lake City, Utah.

Lower Michigan High Grade Grazing Land I Offer One Continuous Tract of Twenty Thousand Acres

Well Located—Excellent Soil—Well Watered—Railroad to the Land—Near Chicago, Buffalo and Detroit Markets—Annual Rainfall 30 to 35 inches.

Also Several Smaller Tracts, in Same Locality, of
One to Ten Sections each.

PRICES AND TERMS REASONABLE

EDWARD F. LOUD - - - Oscoda, Michigan

March, 1918

Strychnine

Sulphate or Alkaloid

Write for Prices

3 grain Strychnine, double pink capsules, same as furnished U. S. Biological Survey, \$1.50 per 100: \$12.50 per 1,000.

HERBERT F. DUGAN

1170 Sutter St., San Francisco, Calif.



HOTEL UTAH

SALT LAKE CITY

ROOMS WITHOUT BATH
\$1.50 and \$2.00 PER DAY
WITH BATH \$2.50 and UP.

"The very best of everything at sensible prices"

Consolidated Wagon & Machine Company
WAM Co.

Leading Implement and Hardware Dealers
WOOL GROWERS SUPPLIES
At 50 Places in Utah and Idaho.

DYERS
BEST BUYERS AND SELLERS OF CATTLE
HOGS AND SHEEP STOCK YARDS-OMAHA
DROS & CO

IN CENTRAL OREGON

Am inclosing my annual dues; did intend to meet you at the convention but owing to the shortage of experienced help decided to wait until after the war.

We are having the mildest winter in this immediate vicinity ever known and the sheep have actually gained flesh during the winter, but no wonder for we have had not to exceed three days cold and the grass is making a fine growth.

J. E. HINTON, Oregon.

HAUL LIVESTOCK BY MOTOR TRUCK

Washington, D. C.—Existing conditions around this city compel local slaughterers to haul a considerable number of livestock to the killing plants. Large numbers of the smaller species of meat animals marketed are hauled into the city in wagons and auto trucks or are shipped in by express or boat. The commission men who handle these animals are located a long distance from the killing plants and when a slaughterer buys from them he must provide means for delivering his purchases to the slaughter house.



The Great Home Comfort CAMP WAGON

More Room, More Convenient
and More Durable Than Any
Other Camp on the Market.

Manufactured and Sold by
SIDNEY-STEVENS IMPLEMENT CO.
OGDEN, UTAH

The two largest killing plants have large auto trucks for this purpose. They sometimes haul as many as 36 calves weighing from 125 to 130 pounds each in one load. They also haul large numbers of lambs and often cattle in these trucks. Recently on account of the frozen and icy condition of the roads and streets one slaughterer hauled 31 cattle about six miles to his plant. The number in each load varied from five to nine animals depending on the weight. Often when receipts of killing stock are light the local slaughterers go into the country and buy stock which they haul to the slaughter houses.

FROM YAKIMA COUNTY, WASH.

Enclosed please find check for \$5.00—1918 dues to the National Wool Growers Association.

We have had a very mild winter here, plenty of rain and plenty of green grass, but very little snow. Our sheep are doing fine. We are ranging our ewes and feeding one-quarter of a pound of cottonseed cake since January 10. We are feeding a band of ewe lambs all the cut hay they can eat and one-quarter of a pound of soya bean cake per day. We are lambing 3,700 ewes this spring, starting March 5. We are going to have a photograph of our headquarters' camp taken at lambing time and will send you one which we hope to see published in the Wool Grower.

Every indication points to a mild spring, but one never can tell in this country what it will be until it is past.

BUTLER & KNOX.

FROM NORTHEAST IDAHO

Enclosed you will find check for one dollar for subscription for Wool Grower.

Have some snow, but weather is still fine. Had a splendid gathering of Lemhi wool growers in Salmon just after we got back from Salt Lake. When we told them what a success the National was, many said they would try to be there next year.

EMMA R. YEARIAN.

March, 1918

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WOOLGROWERS ATTENTION

Are you satisfied with your present banking connections?
IF NOT--begin the New Year doing business with

The National Bank of the Republic

Capital	\$ 300,000.00
Surplus and Undivided Profits	358,487.63
Deposits	6,265,191.60

W. W. CHADWICK
DEALER AND GROWER
CATTLE — SHEEP — RANCHES
310 Dooly Building SALT LAKE CITY Phone Wasatch 1229

Utah-Idaho Live Stock Loan Co.
LIVE STOCK LOANS

Telephone Was. 6554

1025 Kearns Bldg.

Salt Lake City, Utah

MONEY TO LOAN ON CATTLE and SHEEP
Application blanks will be sent upon request.

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**EVERY WOOL GROWER NEEDS
AN ATTRACTIVE LETTER HEAD**

WE PRINT THE

National Wool GrowerTHAT IS A SAMPLE OF OUR WORK

We will furnish a nice half tone and get you up an attractive letter head and envelope. It will help your business.

FOR PARTICULARS WRITE THE

CENTURY PRINTING COMPANY

W. G. ROMNEY. J. Q. RYAN. CENTURY BLDG., 231-3-5 EDISON ST., SALT LAKE

**CHANGE IN LIVE STOCK
SHIPPING CONTRACTS**

Chicago, Ill.—The railroads west of the Mississippi River are revising their livestock contracts to conform to a recent ruling of the Interstate Commerce Commission which becomes effective March 1, 1918, and is of considerable importance to shippers of ordinary livestock in the territory affected. According to the new form of contract shippers of ordinary livestock are not required to declare its value or to pay rates dependent thereon provided the shipment is described as "ordinary livestock," or the kind or kinds of stock specified in detail. Animals valuable for special uses such as racing, breeding or show purposes should be so described in the contract if special valuation is expected in cases of damage. On January 1, 1918, a similar change became effective in territory east of the Mississippi and north of the Ohio rivers and was announced in the Live Stock and Meat Trade News for the week ending January 9, 1918.

DOCKING LAMBS

About two years ago the National Wool Grower made an investigation of the different systems of docking lambs and reached the conclusion that Fred Ellenwood of Red Bluff, California, was using a docking iron that was far superior to docking with the knife or any other device we had seen. Since then this paper has constantly urged sheepmen to buy these irons. The result is that today hundreds of sheepmen are docking with the hot iron who two years ago scoffed at the idea, and the peculiar thing is that these men are the loudest in their praise of this system. On a recent trip to Idaho we found one man using five sets of these irons and he now thinks lambs should not be docked in any other way.

These irons have saved thousands of lambs in the last two years and put a pound or two extra weight on a million more. We are going to continue urging the use of these irons until knife docking will be forgotten.

March, 1918

"Sheep Diseases"

A valuable book for the Western sheep grower. Gives a concise history of the breeds; management; prevention of disease; the various ailments—contagious and non-infectious; complete illustrated chapters on poisonous plants and parasites. Written for the practical man.

237 Pages. 76 Illustrations.
Price \$2.50 postpaid from author

DR. E. T. BAKER, MOSCOW, IDAHO

Union Wool Company**Union Land & Cattle Company**

**J. E. GOSLING, Agent
314 Ness Building
Salt Lake City, Utah**

DEALERS IN

Wool, Sheep and Cattle

BOSTON OFFICE — 10 HIGH STREET
SAN FRANCISCO OFFICE—FIRST NATIONAL
BANK BUILDING
RENO OFFICE—RENO NATIONAL BANK BLDG.

THE NATIONAL WOOL GROWER**REPORT OF THE SHEEP TRADE
AT ST. JOSEPH FOR THE
MONTH OF FEBRUARY**

The supply of sheep and lambs at the St. Joseph market during the

**We Have What
You Need**

We are an independent firm and have no connection with any other concern. We are sole agents for everything we do not manufacture ourselves and we specialize in wool growers' requirements.

Modern Shearing Sheds (Newest Designs)
Shower-Spray Dipping Plants
Power Presses for Baling Wool
Standard Wool Packs
Branding Stencils
Fountain Branding Brushes
Bale Branding Inks
Weighing Scales for Wool
Wool Tables (Roller Tops, Double Deck)
Wool Baskets
Lamb Wool Lifters
Sheep Branding Devices
Bale Hooks and Skewers
Burlap Sewing Needles
(Redditch Steel)
Sewing Twine for Bales
Wool Books, Tally Sheets, Etc.

Write for particulars and quotations:

Western Contract Company

J. C. Findlay, Manager
508-509 Continental Bank Building
SALT LAKE CITY

ESTABLISHED 1863

J. Bateman & Co.

Successors to Justice, Bateman & Co.

Wool Commission Merchants

122 South Front Street, Philadelphia

Consignments Solicited

Liberal Cash Advances

PORLAND

SAN FRANCISCO

**CRIMMINS & PEIRCE COMPANY
WOOL and MOHAIR**

BOSTON, MASS.

SALT LAKE CITY AGENTS

C. C. BROWN, 1502 Walker Bank Building, Telephone Wasatch 1308.
J. W. SUMMERHAYS & SONS CO., 536 South 3rd West Street, Telephone Wasatch 3445

month of February shows a slight decrease as compared with the corresponding month of one year ago. The general trend of values has been a shade lower as compared with prices paid during January.

The extreme high point during the month was in the early part when \$17.25 was reached on best lambs. The range of prices on all fat lambs has been from \$15.75 to \$16.75.

Sheep show very little change and prices are practically on the same level with the January market.

The bulk of our supplies received the past month consisted largely of Colorado and Nebraska fed stock with a very light supply from the local territory—the quality possibly being some better than earlier in the year, but the big proportion of the receipts ran largely to extreme weighty lambs, which was on account of the lambs going into the feed lots last fall, heavier than usual. Packers, owing to the scarcity of handyweight lambs, have been very keen after this kind, while heavyweights have been slow sale. Throughout the month, all good prime handyweight lambs weighing from 75 to 80 pounds have sold in a range of \$16.75 to \$17.25. Lambs averaging 85 to 90 pounds sold from \$16.25 to \$16.75 and those weighing from 90 to 100 pounds in a range of from \$15.00 to \$16.00, owing to quality and grade—the lighter weights, of course, selling at the high values.

We have had a very good demand the past month for ewe lambs to go back to the country for breeding purposes, which has helped sustain the market to some extent—the shortage of cars undoubtedly has been another factor in preventing values from going lower as we are very confident that had Colorado as well as Nebraska feeders been able to have obtained cars which were ordered during the past month, receipts would have undoubtedly been considerably heavier than they have been. The supply of sheep has not been heavy, very few wethers or yearlings reaching the market with practically everything in the mutton line consisting of fat ewes—\$14.50 has been the top price paid for yearlings

March, 1918

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with the bulk selling from \$13.00 to \$13.85. What few aged wethers we have been getting have been selling from \$13.25 to \$13.50. Prime ewes have sold up as high as \$12.75 with the bulk going from \$11.50 to \$12.25.

Providing feeders can get cars during the coming month, in all probability there will be heavy movement of sheep and lambs from Colorado and also from the Nebraska territory, and we should undoubtedly have fairly liberal supplies. Under present prices, the Colorado feeders are losing quite a little money on their winter's feeding and with the future not any too encouraging, they are not going to hold their stuff back any longer than they can possibly help.

However, since the Food Administration has removed the ban and allows mutton and lamb to be eaten on meatless days, west of the Mississippi River and in Illinois and Wisconsin, we believe this has had some effect in helping the trade, but we believe market conditions can still be improved if they would remove this ban in all sections.

CONDITIONS IN NEW MEXICO

Considering drouth conditions that have prevailed throughout this country for a year and a half or more, sheep have done remarkably well this winter. Most all growers are feeding small bunches, but I do not know of any one who is feeding everything. Our rains last summer were not general so naturally what good winter grass we had was in small spots and hard to reach. Thousands of breeding ewes were sold and shipped from this section last fall; some owners selling out completely, others just cutting down in their numbers of breeding ewes and wintering ewe lambs instead.

Lambing this spring will be a hard proposition and 30 or 40 per cent will be a good average unless we get plenty of snow or rain during March or the early part of April.

L. G. ELLETT, New Mexico.

This will be our most expensive year as we will have two offices to maintain.

FARNSWORTH, STEVENSON & CO.

Established 1848

WOOL MERCHANTS

Domestic Wools of All Descriptions Sold on Commission

CONSIGNMENTS SOLICITED

116-122 FEDERAL STREET

BOSTON, MASS.

Hinie Klecker Sheep Commission Co.**We Buy and Sell Sheep Exclusively**

612-24 LIVE STOCK EXCHANGE

KANSAS CITY, MISSOURI

ATTENTION WOOL GROWERS

SALTER BROTHERS & COMPANY

WOOL BROKERS—216 SUMMER STREET, BOSTON, MASS.

Solicits wool shipments for direct sale to the mills. Always sold subject to shippers consent.
LIBERAL ADVANCES. BEST OF REFERENCES.**WOOL****SHEEP PELTS****WOOL**

Your **WOOL** and **SHEEP PELTS** are **MORE VALUABLE** to you when you let US sell them direct to the Manufacturers and Wool Fulleries for you on commission, for you get the **FULL VALUE** of them. You **KNOW** what you have to **Pay us** and we **know** what we are to receive for our **SERVICES**. There is no speculative margin. You get the **FULL MARKET**, we get our commission. Your **WOOL** and **SHEEP PELTS** are sold on the open market like your live stock and you have found the commission way the **BEST** in that, WHY NOT in selling your **WOOL** and **SHEEP PELTS**? Ship your wool and sheep pelts now to us and let your returns and our services speak for themselves. Shipping tags furnished free. Correspondence solicited.

C. J. MUSTION WOOL COMMISSION COMPANY

(The Only Strictly Commission House in Kansas City)

16th and Liberty Sts., 1½ blocks east of the Live Stock Exchange Bldg., Kansas City, Mo.

Jeremiah Williams & Co.**WOOL****Commission
Merchants****481 Summer Street, Boston, Mass.****Western Office, McIntyre Building, Salt Lake City, Utah**

FROM SOUTHWEST COLORADO

In this section of the sheep world, the "coming soon" condition is beginning to show to a great extent.

For only a score or more years

"We buy and sell everything"
UTAH-IDAHo BROKERAGE COMPANY
 No. 339 West 2nd South Street
 Phone Was. 2987. SALT LAKE CITY, UTAH
 Hay, corn, cotton seed cake, oats, barley
 or anything that the sheepman needs.

Cotton Seed Cake

Corn, Wheat, Oats, Barley, Rye, Hay
 Rock Salt

Carlots Only. — Prompt Service.

C. A. Smurthwaite Grain Co.

516 Vermont Bldg.,
 (Opposite Tabernacle Gates)
 Salt Lake City, Utah

COTTON SEED CAKE, MEAL AND CORN

Direct representatives of the oil mills of Texas, Oklahoma and California in sale of nut size, pea size and meal. Wire or write us for lowest delivered prices. We expect embargo on cake shipment from the South will be lifted soon. Let us have your orders for spring and summer shipments.

COLLINS BROKERAGE CO.
 License No. G-27843.
 202 Ness Bldg., Salt Lake, Utah.
 Across from Cullen Hotel.

BETTER ORDER NOW—CARS ARE GOING TO BE SCARCE

COTTON SEED CAKE—CORN HAY—STOCK SALT—SUNRIPE STOCK FOOD

BROWN BROKERAGE COMPANY, OGDEN, UTAH

AT YOUR SERVICE

DEALERS IN CAR LOTS

Globe A-1 Brand Cottonseed Meal, Cottonseed Pea and Nut Cake

45% Protein and Fat. Prompt shipment from Los Angeles, Cal.
 Wheat, Oats, Barley, Corn, Timothy, Alfalfa, Rock Salt.

GLOBE GRAIN & MILLING CO.

No. 302 Kearns Bldg., Salt Lake City.

Also Portland, San Francisco, Los Angeles

back, this country has been showing increasing interest in the sheep industry. Formerly, it was used for cattle grazing, but has rapidly changed. Until just the last few years, there has been a vast amount of outside range which has always yielded a heavy growth of sagebrush, mainly, also numerous varieties of other browse, and until the present time, it has wintered large flocks and brought them out in fair condition in the spring without extra feed of any kind. But owing to the "pest" as the dry farmers are sometimes called by the greedy stock raiser, the open range is nearly gone, and is going to be put to a better use, we hope, and be made to support more and better sheep and cattle.

Nevertheless, there are several large bands of sheep left, and these are dodging around here and there for range; at the present cottonseed cake is being fed, and most all expect to feed alfalfa hay later in the winter, which is going to be rather expensive this year. Some hay early in the hay making season was bought as low as \$9 a ton, and some feeders have paid as high as \$22 per ton for loose hay, rather 450 feet, which this year is, in most cases, a very short ton. Some hay growers will not quote prices on their product.

Thus far, this has been a very favorable winter and has delayed heavy feeding, as there was no snow hardly

until after the new year.

The foregoing conditions are going to bring about a better sheep country, I believe, generally speaking, as the large flocks will be split up into farm bands where a larger per cent of lambs and wool will be saved and where better grades of sheep will be kept for breeding purposes. This will also bring about the balance on the profit side of the farmers' accounts and furnish more food and clothes for the world's greatest war. Stock growers and farmers are generally good, patriotic citizens; let us be better ones and help Uncle Sam to wave the Stars and Stripes to victory, BECAUSE WE ARE RIGHT.

A. H. GREER.

SHEEP MARKET AT NORTH PORTLAND, ORE.

The sheep market has been in sort of a lifeless condition all month. Receipts are nominal and are showing up several thousand head under February's receipts of 1916. Prices seem to be in line with Eastern markets when freight and shrinkage are considered.

Lambs are bringing up to \$15.50 for best quality as compared with a top of \$12.75 for the same month last year.

The sheep end of the market does not show much change over last month. However, there has been a little strength added to yearlings and wethers.

Killing ewes are selling strong at \$12.00; wethers at \$13.00, and yearlings at \$13.50 for top quality.

There are very few feeders going out, chiefly for the reason that breeding ewes are hard to get and are selling very high. The demand for breeding ewes is very good. Choice young ewes are scarcer than ever before.

There seems to be a more active feeling for the live mutton trade at North Portland for next month. Inquiries and a general undertone of comment make it almost certain that there is to be expected a much more active trade during the coming few weeks.

March, 1918

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FROM CENTRAL UTAH

We are having a very mild winter in this part of the state. In the forepart of the winter we didn't have any snow, but January brought about 24 inches, and we have had sufficient since that time. The sheep are in good condition. We feed a number of old ewes in this locality, lamb them early and put the lambs on the early market, fattening the ewes for the fall market, and this seems to be a paying business. In lambing these old ewes in the corral we raise from 125 to 150 per cent. We also fed a large number of lambs last fall, bought for 15 cents per pound, and could have contracted for December and January delivery for 18 cents per pound, but the feeders seemed to think that the price would be raised. We have now disposed of the last and the best price received for any was 14½ cents per pound.

In the fall of the year we select our choicest ewes and ewe lambs and send them on the desert in the southern part of the state. They are in good condition at the present time, and they usually winter all right. Our losses very seldom go above 2 to 3 per cent in the seven months. We always lamb these ewes on the range in May, and get from 85 to 90 per cent lambs.

In regard to the hay situation, there is no demand for it here. You can buy good hay in the stack for \$11 per ton, where at the same time last year, it sold for \$25.

We are preparing for the shearing season, and it looks as though we will have to pay about 27 cents per head for shearing, which includes sacks and loading the wool on the cars. In former years we paid 15 cents per head for the same.

A. ANDERSON, Utah.

NOT MANY SHEEP SELLING

The information that reaches us from different parts of the country indicates that the number of breeding ewes, or other aged sheep selling at this season of the year is very limited, indeed. This is not because there is

THE NATIONAL WOOL GROWER

any lack of demand for these sheep, but is due entirely to the fact that there is a pronounced shortage of money. Loan companies and banks operating in the West are very reluctant to take on any additional livestock loans, and we understand that parties who had purchased sheep and made a payment down expecting to borrow additional money on the delivery of the sheep have been somewhat embarrassed in attempting to get it.

Of course, this shortage of money is due mostly to the Liberty Loan which is taking a very great supply of Western money out of the country and putting but little back. That, however, cannot be avoided. We have no doubt but that as spring approaches, additional money will be available, and sheep will begin to move in larger volume.

SALE OF GOVERNMENT LANDS

The National Wool Growers' Association for some time has been urging that stockmen be permitted to buy government land in cases where they own the surrounding lands. Under existing law they are permitted under certain conditions to purchase an additional 160 acres that adjoins them, but the Department of the Interior in response to requests for the privilege of purchasing additional isolated lands issued an order on October 31, which permits the purchase of isolated tracts up to and including 120 acres under certain conditions. The order of the Interior Department follows:

"The limitation contained in paragraphs 2 and 5 of the general regulations, circular of January 11, 1915 (43 L. D., 485), to the effect that no sale will be authorized upon the application of a person who has purchased under Section 2455, Revised Statutes, or the

amendments thereto, any lands, the area of which, when added to the area applied for, shall exceed approximately 160 acres, may be waived in cases where it is shown to your office upon satisfactory evidence that isolated tracts, not exceeding 120 acres each in area, are entirely surrounded by land owned by the applicant and have been isolated for five or more years. In such cases in addition to showing the above facts and complying with the other requirements of the said circular of January 11, 1915, applicant should be required to show that the lands are not valuable for farming, but are chiefly valuable for grazing or for special use in connection with the adjoining lands.

"Applicants under this amendment must furnish proof of ownership of the land surrounding that applied for; also detailed evidence as to the character of the land applied for, particularly with respect to its comparative values for farming, grazing, and special use in connection with the adjoining lands, which evidence must consist of an affidavit by the applicant, corroborated by the affidavits of not less than two disinterested persons having actual knowledge of the facts."

This will be our most expensive year as we will have two offices to maintain.

Be sure and pay your dues for 1918.

For Sale!

2300 ewes and their lambs, one-half Merinos, one-half crossbreds. 300 are two-year-olds and the balance have good mouths. All lambs are one-half blood black-faced. 50 per cent of lambs dropped in February, balance in early March. Price \$12 for ewes, \$8.00 for lambs. April 15th delivery at shearing pens, with free use of range until May 15th.

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TOO MUCH MEAT CONSERVATION

In his address to the Salt Lake Convention Mr. Cotton of the U. S. Food Administration placed a part of the responsibility for too much lamb conservation on that portion of the public that has become over zealous on the meat conservation idea. He spoke as follows:

"Now, as to mutton. As you know, mutton has not been and is not taken by the Army or exported in large quantities, and the Food Administration has had no policy in regard to it, and has no power or instrument to affect the prices paid for sheep and lambs, save as such prices keep step with prices for cattle and hogs.

"A misapprehension has arisen, born of the enthusiasm of a lot of amateur conservationists and publicity artists.

"Let me make clear that the Food Administration has urged no prohibition or interference with the consumption of lamb or mutton by the American people, save the meatless days, and that it goes further and urges the use of mutton in preference to the meats which are exported, beef and pork. Further, the Food Administration fully understands the reasons and the necessity for the marketing of lamb at this period of the year, and has

THE NATIONAL WOOL GROWER

no word against it.

"In the absence of legal authority to fix prices, and in the absence of buying orders which might affect the market, that is about all the Food Administration can at this time fairly say to the sheepmen. The question of wool I know nothing about, and am not authorized to speak upon. It is outside the Food Administration."

RESOLUTION OF ARIZONA WOOL GROWERS ASSOCIATION

Whereas, we are endeavoring to assist all we possibly can and desirous of being of service to the national government in this time of crisis by producing a maximum amount of mutton and wool despite great difficulties and abnormal expenses in so doing, and

Whereas, if we were assured of a longer tenure in the use of the range for a definite number of stock on the National Forests, we would be able to handle our business with more certainty and with greater efficiency, thus resulting in a greater and more assured production of mutton and wool, and,

Whereas, practically all the lands within the National Forest capable of cultivation, have now past to or have been listed to homesteaders who have established preferences for grazing privileges on the forest, and,

Therefore, no injustice or infringement of privileges will result in their rights, we, therefore, strongly recommend to the Secretary of Agriculture and the Forester that permittees on the National Forests be given ten-year permits subject to adjustment at the end of each five-year period but not otherwise unless for damage to the range.

Buick

The Thinker

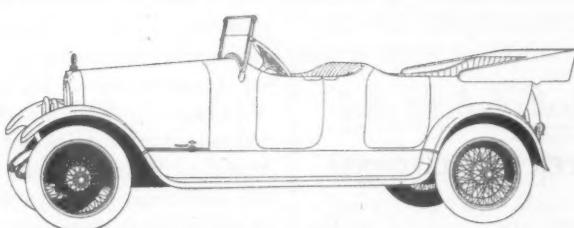
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LAMBING IN WASHINGTON

The general outlook for sheep in this vicinity is good. Mr. Thomas Drumheller, who is lambing about 2,400 head of ewes in sheds near Ephrata, has just recently said that he was saving a good per cent of lambs and that both his ewes and lambs are doing quite well. Mr. Louis Sawyer reports that he has had a very small loss and that his sheep are doing fairly well. He has not fed but very little this winter. The sheep belonging to Mr. Dave McCall are doing well and he has not fed anything to speak of at this date. Mr. W. W. Hopkins' band of Lincoln ewes are looking fine. They have been out all winter practically without feed and there are very few signs of wool break among them. They have the appearance of delivering a heavy wool clip this spring. I recently visited Mr. Thomas Rennie, who is camped in the Moss Lake territory. He has some January and February lambs and they are "dandies."

The general outlook for the wool clip this spring is reasonably good. The chief worry of the sheepmen of this locality is how and where they are going to get experienced men to help with the lambing this spring, as it is quite difficult to even get good herders at this time. We have recently had the coldest snap of the winter, accompanied by about six inches of snow. However, I have not heard of any serious damage to stock as a result of this storm.

MATT. SMITH, Wash.

DRY WINTER IN CALIFORNIA

We of Shasta and Lassen Counties have experienced the most pleasant and driest winter in the history of California according to the oldest settlers here. I have a small herd of sheep which I have been grazing in the mountains and nooks here and there. They are in excellent condition—would make good mutton now. The grass has been growing all the time until the last week, when there was a little snow, about five inches. This will be a fine thing for grain and vegetation.

We live in hopes that we shall have more moisture during March and April; if not, we may suffer on account of it in time to come. There are very few sheep here. However, some large bands come in from the south usually to graze through the mountains from May to November.

ARTHUR A. OILAR, Calif.

FROM WASHINGTON

We have had a very mild winter with a liberal amount of rain but no snow to speak of. The sheep are in good shape and will go into the lambing camps in better condition than for years. We have had no losses. Feed has been high; alfalfa, \$25 a ton and cottonseed cake, \$60. This is our first year to feed cottonseed cake on the ranges. We like it very well and will all use it again next year. Sheep sold here as high as \$22.50 for young ewes with lambing range put in. There is no talk of wool prices except by dealers who are talking of starting trading at from 50 to 55 cents. Lambing will start here about March 20, and if we have a nice spring, we will have a good lambing with the ewes in their present excellent condition.

JAMES M. DAVIS, Wash.

FROM OREGON

We have certainly experienced an ideal winter in this part of Oregon, the John Day valley. Green grass has grown almost steadily since December 1 and stock of all kinds were on the range far into the winter and remained in unusually good condition. Many of the bands of sheep are still out, and from present outlook will not be fed at all this season. Sure to have a record wool clip this spring and all are figuring on a big per cent of lambs.

Most of the surplus hay in the valley was sold early last fall at prices ranging from \$12 to \$20 a ton. But at present the hay market is down and out. I understand \$15 is being offered on contract for the coming lamb crop and know of one offer of \$20 for a bunch of ewes.

C. A. VALADE, Ore.

LAMB BORN WITHOUT TAIL

I have been in the sheep business for thirty years, have raised many thousands of lambs, but never raised or heard of a lamb born without a tail. But on the eighth of this month we had a ram lamb come without any sign of a tail. He is as perfectly docked as it is possible to be. If you can discover a ewe also born without a tail, I should like to get her and breed them.

About two weeks ago a coyote came to my feed yards and rounded up the herd in the middle of the day. The foreman went over and ran him off about a hundred yards, put his last cartridge in the gun, and squatted down among the sheep. In a few minutes the coyote came back to the bunch within a rod of where the foreman was. As the foreman raised his gun to shoot, the coyote turned to run, but got a bullet through both hind legs. He had evidently been in a trap as he had only three feet. We found he had bitten about ten sheep, all of them on the nose. We treated them with peroxide, which we had in camp. Two of them, fine purebred ewes, have since developed rabies and died. I have furnished three horses and a number of sheep as bait during the winter to a government trapper, who is trapping on my range. He has put out hundreds of baits and has caught several coyotes. All dogs in this vicinity are required to be muzzled. Still there are people who scoff at this deadly menace.

The lamb feeders in this neck of the woods have now sold their lambs and figure their losses at \$2 a head, due to the "eat-no-lamb" propaganda. They are a discouraged lot of farmers.

Wool buyers are not making the faintest kind of a cheep. Inquiries for rams are numerous. One bunch of fellows got together and purchased a lot of ram lambs at \$55 a head for use next fall in California.

My sheep never looked better, but, oh, ye feed bill!

W. D. CANDLAND, Utah.

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FROM SOUTHERN CALIFORNIA

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President—Fred Huyler, Gladstone, N. J.

Secretary—E. Chidester, Mechanicsburg, Ohio.

Write the Secretary for information and printed matter about Dorsets.

ting the public right as to the Food Administration's policy regarding lamb,—also, I notice the Food Administrators are recommending to the public at large, on food cards sent to each family, that they use mutton and lamb in preference to beef and pork, and likewise, papers here on the coast are giving prominence to the fact that people west of the Mississippi River are permitted to eat mutton and lamb on meatless Tuesdays,—and I have no doubt that this will help to stabilize the market.

I have read with very much interest the February number of the National Wool Grower and shall look forward to each issue in the future. The writer operates a sheep ranch on Cataline Island as well as two ranches here on the main land and has quite a large number of sheep, as well as farming on a good sized scale.

We have been witnessing a very serious drought here in California, having had practically no rain for the past year until a week or so ago when we were the recipients of a good storm which has brought our total seasonal rainfall up to date to 7 inches, and the green feed has now started so that I think we will be able to get through

The American Hampshire Sheep Association

Hampshires are the most popular sheep in the United States. They are the most practical farmers' sheep in existence. Hampshires sold for the highest average price at the National Wool Growers auction sale in September, 1916. The highest priced sheep sold at the 1917 sale was a Hampshire. The sheep that won the first prize on earload wether lambs at 1916 International. This ear wether lambs won Grand Championship over all breeds and all ages. The sheep that always pleases; always makes money; always wins. The best mutton sheep in the world. Write the Secretary for information.

Robert Blastock, President, Donerail, Ky.
Comfort A. Tyler, Secretary, 36 Woodward Ave., Detroit, Mich.

nicely; however, we are having one difficulty here in California, the same as other sections of the country, in securing ranch help, and I notice an article in the Wool Grower on this subject.

It seems to me that there is no more patriotic duty than producing meat and wool and that those who are engaged in this line are working to win the war just as though they were serving on the firing line and I believe that it is harder for some of them to stay at home than it would be to go abroad, and especially is this true of foremen and those members of owners' families who are necessary to the successful carrying on of the business, and, I believe, the government has recognized the importance of these men in the classification on the questionnaire. However, it would seem to the writer as though the production end would be wonderfully helped out if the government would in some manner, by the issuance of either a button or badge, with some wording such as "U. S. WAR SERVICE," "Producer," "Rancher" or "Farmer," or something of this kind in line with the government's present recognition given to employees of ship building companies to whom, I understand, are issued badges reading "U. S. WAR SERVICE, —SHIP BUILDING,"— recognize the value of the work of those who are necessary for the production of the country,—and if this matter was taken up by such institutions as yours, and the National Livestock Association, I have no doubt that good results would follow.

J. E. MAURER.

MONTANA NEWS

We are wintering in good shape. Sheep are in a good, thrifty condition and we can see our way out all right. If we only have good lambing weather, we will probably make back some we lost last winter. The winter has been fine up to now.

FERD. H. HOFFMAN, Mont.

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